



STANDING ADVISORY COMMITTEE

AGENDA

Tuesday, June 7, 2022 at 3:00 p.m.

Truckee Meadows Water Authority

Independence Room, 1355 Capital Blvd., Reno, NV

NOTES:

1. The announcement of this meeting has been posted at the following locations: Truckee Meadows Water Authority (1355 Capital Blvd., Reno), at <http://www.tmwa.com>, and State of Nevada Public Notice Website, <https://notice.nv.gov/>.
2. In accordance with NRS 241.020, this agenda closes three working days prior to the meeting. We are pleased to make reasonable accommodations for persons who are disabled and wish to attend meetings. If you require special arrangements for the meeting, please call 834-8002 at least 24 hours before the meeting date.
3. Staff reports and supporting material for the meeting are available on the TMWA website at <http://www.tmwa.com/meeting/> or you can contact Sonia Folsom at (775) 834-8002. Supporting material is made available to the general public in accordance with NRS 241.020(6).
4. The Committee may elect to combine agenda items, consider agenda items out of order, remove agenda items, or delay discussion on agenda items. Arrive at the meeting at the posted time to hear item(s) of interest.
5. Asterisks (*) denote non-action items.
6. Public comment is limited to three minutes and is allowed during the public comment periods. The public may sign-up to speak during the public comment period or on a specific agenda item by completing a "Request to Speak" card and submitting it to the clerk. In addition to the public comment periods, the Chairman has the discretion to allow public comment on any agenda item, including any item on which action is to be taken.
7. In the event the Chairman and Vice-Chairman are absent, the remaining SAC members may elect a temporary presiding officer to preside over the meeting until the Chairman or Vice-Chairman are present (**Standing Item of Possible Action**).

1. Roll call*
2. Public comment — limited to no more than three minutes per speaker*
3. Approval of the agenda (**For Possible Action**)
4. Approval of the minutes of April 5, 2022 meeting (**For Possible Action**)
5. Presentation of Fiscal Year 2022 Q3 year to date financial results — Matt Bowman*
6. Presentation on the final budget for the Fiscal Year ending June 30, 2023 and the 2023-2027 Five-Year Capital Improvement Plan — Matt Bowman and Sandra Tozi*
7. Update on status of the Mt. Rose Water Treatment Plant — Danny Rotter*

8. Presentation of TMWA's agreement with the National Forest Foundation for the Lady Bug project fuels reduction project above Stampede Reservoir — Stefanie Morris and Kara Steeland*
9. Discussion and possible direction to staff regarding agenda items for future meetings (**For Possible Action**)
10. Staff Items* (Unless otherwise listed with a topic description, this portion of the agenda is limited to announcements)
11. Committee Items* (Unless otherwise listed with a topic description, this portion of the agenda is limited to announcements)
12. Public Comment — limited to no more than three minutes per speaker*
13. Adjournment (**For Possible Action**)



STANDING ADVISORY COMMITTEE

DRAFT MINUTES

April 5, 2022

The Standing Advisory Committee (SAC) met via ZOOM. Chair McGuire called the meeting to order at 3:03 p.m.

1. ROLL CALL

Primary Members and Voting Alternates Present: Fred Arndt, *Kristine Brown-Caliger, Jordan Hastings, Colin Hayes, Don Kowitz, Carol Litster, Neil McGuire, Ken McNeil, Chris Melton, **Jonnie Pullman, Alex Talmant and *Jerry Wager.

Alternates Present: Ken Becker, Karl Katt, **John Krmpotic, Kevin Ryan, Dale Sanderson, and *Jim Smith.

Primary Members and Alternates Absent: Robert Chambers and Ann Silver.

**Indicating members who attended the meeting virtually via Zoom.*

***Indicates members who arrived late during the meeting but did not announce their arrival and there was no timestamp recorded.*

Staff Present: Matt Bowman, Sophie Cardinal, Robert Charpentier, John Enloe, Scott Estes, Sonia Folsom, Mark Foree, Andy Gebhardt, Bill Hauck, Stefanie Morris, Danny Rotter, John Zimmerman, and Legal Counsel Lucas Foletta (McDonald Carano).

2. PUBLIC COMMENT

There was no public comment.

3. APPROVAL OF THE AGENDA

Upon motion duly made by Member Kowitz, and seconded by Member Litster, and carried by unanimous consent of the members present, the Committee approved the agenda.

4. APPROVAL OF THE MINUTES OF THE FEBRUARY 1, 2022 MEETING

Vice Chair Hastings noted an error on page two; change the wording to say, “*since* Dec 30th” and delete “as of”.

Upon motion duly made by Member Melton and seconded by Member Arndt, and carried by unanimous consent of the members present, the Committee approved the amended February 1, 2022 meeting minutes.

5. WATER SUPPLY UPDATE

Bill Hauck, TMWA Water Supply Administrator, updated the Committee on the current water supply status: Lake Tahoe is currently 1.03 feet above the rim, March was the third significantly dry month in a row, the Truckee Basin snowpack is currently about 52% of normal, despite the decline in runoff forecast, the model runs are still projecting normal Truckee River flows through mid-September (possible October), and TMWA’s upstream drought storage is approximately 53,000 acre feet (AF).

Members of the Committee inquired about TMWA’s unique situation considering the media messaging regarding drought in California and having additional conservation measures. Additionally, the inquiry was made if wells were recharged in the winter. Mr. Hauck replied that TMWA always communicates with the community to conserve water and to be mindful of water waste. He also informed them wells were recharged this past winter, approximately 4 million gallons per day at one point and recharge was shut-off on Monday. Additionally, Mr. Hauck stated this was the largest recharge year since 2016 and the first time they were able to recharge on the Mt. Rose-Galena Fan.

6. PRESENTATION OF FISCAL YEAR 2022 Q2 YEAR TO DATE FINANCIAL RESULTS

Matt Bowman, TMWA Financial Controller, provided an overview of TMWA’s financial results year to date: the change in net position was \$5.9m (21%) higher than budget which was driven primarily by higher capital contributions; operating revenue was \$0.3m (<1%) higher than budget; operating expenses were \$2.7m (5%) lower than budget; seeing impacts from inflation, most notably in fuel, but other price increases have not yet been significant; nonoperating expenses were \$1.9m (38%) higher than budget primarily due to a net decrease in fair value of investments; capital contributions were \$4.8m (24%) higher than budget due to receiving the FEMA award for the Glendale diversion rebuild following the 2017 flood event; developer contributions, or connection fees, are outpacing the budget; developer infrastructure contributions is a non-cash item, but have to recognize it as revenue; and total cash on hand was \$241.0m, or \$11.0m higher than, at the beginning of the fiscal year.

Member McNeil inquired about inflation in relation to its impact on TMWA's cost of materials and wages. Mr. Bowman replied he would discuss that in the next budget item.

7. PRESENTATION ON THE TMWA TENTATIVE BUDGET FOR THE FISCAL YEAR ENDING JUNE 30, 2022 AND DRAFT CAPITAL IMPROVEMENT PLAN FOR FISCAL YEARS 2022 THROUGH 2026 AND POSSIBLE RECOMMENDATION TO THE BOARD

Chair McGuire stated the agenda item would be heard as an informational item because the agenda noticed the incorrect fiscal year.

Member McNeil inquired why the Committee couldn't take action on this item since their charge is budgetary and fiscal oversight. Lucas Foletta, TMWA General Counsel, explained that the item was improperly noticed and therefore no action could be taken, but the Committee can ask questions.

Mr. Bowman and Danny Rotter, TMWA Engineering Manager, presented the tentative budget for FY 2023 and the draft FY2023-27 CIP. Mr. Bowman reported the significant increase in capital contributions is the City of Reno contribution for the American Flat project. The water sales model assumes the scheduled rate increases in May 2022 and 2023 as well as an increase in service connections of about 1.5% and an average weather year, a 10.5% projected increase in the salaries and wages category due in large part to additional headcount, an increase in prices of supplies, a 3.4% decrease in interest expense, a significant increase in developer contributions, and Fitch upgraded TMWA's debt rating from AA to AAA. A slight change to the tentative budget in May will be the grants line item; President Biden signed the FY22 Omnibus which includes \$3M for the American Flat project, and will be shared 70% and 30% between City of Reno and TMWA, respectively. Mr. Rotter reported that infrastructure projects have increased (currently have 47 projected and are tracking 79) and will significantly increase in the next eight years, in order to meet demand, and infrastructure requirements, and an increased focus on major rehabilitation projects and mitigating risk.

The Committee had a lengthy discussion regarding connection fees and payment (TMWA will be paid if there is a contract or when a water service agreement is issued), construction costs falling well below budget (TMWA's CIP consistently falls around 80% of budget – good practice to not go over budget), TMWA increasing personnel efficiently and conservatively, the security and surveillance contract (improve infrastructure and cyber security, increased patrol around facilities and service territory), and power generator rentals (in 2021 NV Energy began conducting power shutdowns during fire season and a number of facilities would experience outages if not for the generators).

Chair McGuire congratulated staff on the increase rating by Fitch from AA to AAA for the first time.

No action taken.

8. UPDATE ON STATUS OF THE MT. ROSE WATER TREATMENT PLANT

Mr. Rotter informed the Committee the Mt. Rose Water Treatment Plant is anticipated to go online Wed, Apr 6th. TMWA received the permit to operate this past January and staff has been treating and returning water to the creek before starting up the plant to make sure it meets TMWA's standards. Mr. Rotter added that a tour would most likely be scheduled for the Committee in the next couple of months.

Member McNeil asked if this plant would be controlled remotely . Mr. Rotter replied yes but TMWA is still working on making sure it operates and meets high quality standards prior to switching to remote operations.

Member Ryan thanked staff for the update since he requested this at the last meeting and noted that it was quite an accomplishment.

9. PRESENTATION OF TMWA'S RECLAMATION AND WATER REUSE PROJECTS

John Enloe, TMWA Director of Natural Resources, provided an update on TMWA's water reuse projects: return flow management agreement, American Flat project and Palomino Valley water banking project.

Members of the Committee inquired about the funding and logistics of the projects as it relates to groundwater supply, treatment processes and operations, and Truckee River management. This was an informational item.

10. DISCUSSION AND POSSIBLE REQUESTS FOR AGENDA ITEMS FOR FUTURE MEETINGS

Upon motion duly made by Member Hayes and seconded by Member Melton, and carried by unanimous consent of the members present, the Committee approved the following agenda items for future meetings.

Next meeting:

1. Water Supply Update
2. Presentation of third quarter FY2022 financial performance
3. Presentation of the final budget for FY2023 and five year CIP for FY2023-27
4. Update on Mt. Rose Water Treatment Plant status
5. Presentation of TMWA's Lady Bug project

11. STAFF ITEMS

Andy Gebhardt, TMWA Director of Distribution, Maintenance & Generation, informed the Committee that TMWA is holding its Smart About Water Day on Sat, May 7th 10am-2pm at Lazy 5 Regional Park.

Sonia Folsom, TMWA Executive Assistant, informed the Committee that TMWA's summer picnic will be held on Sat, Aug 20th and to RSVP if they'd like to attend, and will be emailing them the updated contact list soon.

12. COMMITTEE ITEMS

There were no committee items.

13. PUBLIC COMMENT

There was no public comment

14. ADJOURNMENT

With no further items for discussion, Vice Chair Hastings adjourned the meeting at 4:49 p.m.

Approved by the Standing Advisory Committee in session on _____.

Sonia Folsom, Recording Clerk



TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Matt Bowman, Chief Financial Officer
DATE: May 10, 2022
SUBJECT: Presentation of Fiscal Year 2022 Q3 Financial Results

Summary

Please refer to Attachments A-1 and A-2 for full Statements of Revenues, Expenses and Changes in Net Position for both actual to budget and year-over-year comparisons as discussed in the report below.

Budget to Actual

	Actual YTD 2022	Budget YTD 2022	Variance \$	Variance %
CHANGE IN NET POSITION	\$ 33,223,095	\$ 27,276,301	\$ 5,946,794	22 %

Change in net position was \$5.9m or 22% higher than budget through Q3 2022. This was driven by higher capital contributions, higher operating income, offset by higher nonoperating expenses.

Year over Year

	Actual YTD 2022	Actual YTD 2021	Variance \$	Variance %
CHANGE IN NET POSITION	\$ 33,223,095	\$ 36,781,209	\$ (3,558,114)	(10)%

Change in net position was \$3.6m or 10% lower than the prior year. This was due to higher capital contributions offset by lower operating income and higher nonoperating expenses.

Revenue

Budget to Actual

	Actual YTD 2022	Budget YTD 2022	Variance \$	Variance %
OPERATING REVENUES				
Charges for Water Sales	80,898,449	81,719,762	(821,313)	(1)%
Hydroelectric Sales	1,459,283	733,888	725,395	99 %
Other Operating Sales	3,022,322	1,657,647	1,364,675	82 %
Total Operating Revenues	85,380,054	84,111,297	1,268,757	2 %

Operating revenue was \$1.3m (2%) higher than budget through Q3 2022. Other operating revenue was higher by \$1.4m while water sales and hydroelectric sales were lower by \$96 thousand, combined. Other operating sales are trending higher than budget in FY 2022 due to higher than expected new business inspection fees, late fees on past due accounts and customer service call out charges. Each of these items had been impacted by the pandemic in both FY 2020 and FY 2021 and the recovery of these amounts in FY 2022 was underestimated in the budget.

Year over Year

	Actual YTD 2022	Actual YTD 2021	Variance \$	Variance %
OPERATING REVENUES				
Charges for Water Sales	80,898,449	80,496,525	401,924	— %
Hydroelectric Sales	1,459,283	1,883,044	(423,761)	(23)%
Other Operating Sales	3,022,322	1,867,036	1,155,286	62 %
Total Operating Revenues	85,380,054	84,246,605	1,133,449	1 %

Total operating revenues were \$1.1m higher through Q3 2022 than the prior year. Water sales was within 1% of the prior year due to lower consumption offset by the 2.5% rate increase in June 2021. Hydroelectric sales were lower by \$0.4m due to low river flows in the late summer months in FY 2022 which forced the plants to be taken offline. Lastly, other operating sales were higher by \$1.2m due to the reasons stated above.

Operating Expenses

Budget to Actual

	Actual YTD 2022	Budget YTD 2022	Variance \$	Variance %
OPERATING EXPENSES				
Salaries and Wages	18,745,725	20,196,361	(1,450,636)	(7)%
Employee Benefits	8,102,628	9,096,980	(994,352)	(11)%
Services and Supplies	22,917,541	24,141,520	(1,223,979)	(5)%
Total Operating Expenses Before Depreciation	49,765,894	53,434,861	(3,668,967)	(7)%
Depreciation	24,998,305	25,675,589	(677,284)	(3)%
Total Operating Expenses	74,764,199	79,110,450	(4,346,251)	(5)%

Total operating expenses were \$4.3m lower (5%) than budget through Q3 2022. Salaries and wages and employee benefits are both lower due primarily to position vacancies. Services and supplies are 5% lower than budget. Even with increased pricing and contracts, there has yet to be a substantial impact on TMWA's services and supplies expenses in FY 2022. TMWA's leading expenses are power and treatment chemicals, which, combined, are only \$150 thousand over budget through the third quarter.

Year over Year

	Actual YTD 2022	Actual YTD 2021	Variance \$	Variance %
OPERATING EXPENSES				
Salaries and Wages	18,745,725	16,593,615	2,152,110	13 %
Employee Benefits	8,102,628	7,280,979	821,649	11 %
Services and Supplies	22,917,541	20,562,487	2,355,054	11 %
Total Operating Expenses Before Depreciation	49,765,894	44,437,081	5,328,813	12 %
Depreciation	24,998,305	24,809,848	188,457	1 %
Total Operating Expenses	74,764,199	69,246,929	5,517,270	8 %

Year over year operating expenses were \$5.5m higher (8%) than the prior year through Q3. Salaries and benefits are higher than prior year due to Labor Market Index (LMI) increases in July 2021, step increases and increases to headcount. Services and supplies are increased from the prior year due to several items, but primarily more spending (budgeted) on expensed projects and higher electric power costs, due to both rate increases and higher consumption.

Non-Operating Expenses

Budget to Actual

	Actual YTD 2022	Budget YTD 2022	Variance \$	Variance %
NONOPERATING REVENUES (EXPENSES)				
Investment Earnings	1,498,165	1,937,916	(439,751)	(23)%
Net Increase (Decrease) in FV of Investments	(8,489,292)	—	(8,489,292)	— %
Gain (Loss) on Disposal of Assets	83,284	(562,500)	645,784	(115)%
Amortization of Bond/note Issuance Costs	801	(99,750)	100,551	(101)%
Interest Expense	(8,958,464)	(8,910,458)	(48,006)	1 %
Total Nonoperating Revenues (Expenses)	(15,865,506)	(7,634,792)	(8,230,714)	108 %

Nonoperating expenses were \$8.2m higher (108%) than budget through Q3 2022. This is primarily due to a net decrease in fair value of investments of \$8.5m. Five and ten year treasury yields have increased significantly since July 2021. Five year treasury yield rate was 0.89% on July 1, 2021 and 2.42% on March 31, 2022. Investment earnings are also lower than budget due the amortization of investment premiums which have not been historically considered in the investment income budget.

Year over Year

	Actual YTD 2022	Actual YTD 2021	Variance \$	Variance %
NONOPERATING REVENUES (EXPENSES)				
Investment Earnings	1,498,165	2,006,748	(508,583)	(25)%
Net Increase (Decrease) in FV of Investments	(8,489,292)	(2,147,338)	(6,341,954)	295 %
Gain (Loss) on Disposal of Assets	83,284	—	83,284	— %
Amortization of Bond/note Issuance Costs	801	(107,136)	107,937	(101)%
Interest Expense	(8,958,464)	(9,192,031)	233,567	(3)%
Total Nonoperating Revenues (Expenses)	(15,865,506)	(9,439,757)	(6,425,749)	68 %

Nonoperating expenses were higher by \$6.4m or 68% through the third quarter of the fiscal year. This is due primarily to reasons discussed above.

Capital Contributions

Budget to Actual

	Actual YTD 2022	Budget YTD 2022	Variance \$	Variance %
CAPITAL CONTRIBUTIONS				
Grants	2,013,271	1,012,500	1,000,771	99 %
Water Resource Sustainability Program	1,246,506	455,376	791,130	174 %
Developer Infrastructure Contributions	11,982,399	13,633,110	(1,650,711)	(12)%
Developer Will-serve Contributions (Net of Refunds)	3,553,678	2,163,036	1,390,642	64 %
Developer Capital Contributions - Other	8,930,905	7,020,225	1,910,680	27 %
Developer Facility Charges (Net of Refunds)	10,450,248	5,475,999	4,974,249	91 %
Contributions from Others	—	—	—	— %
Net Capital Contributions	38,472,746	29,910,246	8,562,500	29 %

Capital contributions were \$8.6m (29%) higher than budget through the third quarter of FY 2022. One of the large variances is grant revenue. In Q2 FY 2022, TMWA received the FEMA award for the Glendale diversion rebuild following the 2017 flood event. The remaining line items in this category reflect new business/growth related collections and the budget overage is reflective of both larger projects and also continued high volume of projects being processed through TMWA. These amounts are consistent with the prior year as shown below.

Year over Year

	Actual YTD 2022	Actual YTD 2021	Variance \$	Variance %
CAPITAL CONTRIBUTIONS				
Grants	2,013,271	—	2,013,271	— %
Water Resource Sustainability Program	1,246,506	1,190,845	55,661	5 %
Developer Infrastructure Contributions	11,982,399	8,657,287	3,325,112	38 %
Developer Will-serve Contributions (Net of Refunds)	3,553,678	3,823,411	(269,733)	(7)%
Developer Capital Contributions - Other	8,930,905	7,835,082	1,095,823	14 %
Developer Facility Charges (Net of Refunds)	10,450,248	9,681,865	768,383	8 %
Contributions from Others	295,739	—	295,739	— %
Net Capital Contributions	38,472,746	31,221,290	7,251,456	23 %

Year over year, capital contributions are \$7.3m or 23% higher through the first three quarters of the year. This is driven mostly by developer infrastructure contributions and grants which were higher by \$2.0m and \$3.3m, respectively. Developer infrastructure contributions, which don't impact cash flow, can vary quarter to quarter depending on the ability to close out projects. There was no grant revenue recognized in all of FY 2021. Developer contributions continue to trend higher than the prior year which is expected.

Capital Spending

Cash spent on capital outlays and construction projects during the first three quarters of the year was approximately \$24.5m. Total budgeted capital spend for fiscal year 2022 is \$60.1m. Spending on the top three projects for the first two quarters is below -

Disk Drive BPS	\$4.5m
Prater Tank Rehabilitation	\$2.0m
Humboldt-S. Monroe Main Replacement	\$1.7m

Cash Position

At March 31, 2022 total cash on hand was \$228.5m or \$1.9m lower than at the beginning of the fiscal year. Of the total cash on hand, \$185.4m was unrestricted to be used to meet upcoming and future operating & maintenance expenses, principal & interest payments and construction project payments. The remaining \$43.1m was restricted to pay for scheduled bond principal and interest payments as well as maintaining required reserves as stipulated in our bond covenants.

Truckee Meadows Water Authority

Comparative Statements of Revenues, Expenses and Changes in Net Position
For the nine months ended March 31, 2022

	Actual YTD 2022	Budget YTD 2022	Variance \$	Variance %
OPERATING REVENUES				
Charges for Water Sales	\$ 80,898,449	\$ 81,719,762	\$ (821,313)	(1)%
Hydroelectric Sales	1,459,283	733,888	725,395	99 %
Other Operating Sales	3,022,322	1,657,647	1,364,675	82 %
Total Operating Revenues	85,380,054	84,111,297	1,268,757	2 %
OPERATING EXPENSES				
Salaries and Wages	18,745,725	20,196,361	(1,450,636)	(7)%
Employee Benefits	8,102,628	9,096,980	(994,352)	(11)%
Services and Supplies	22,917,541	24,141,520	(1,223,979)	(5)%
Total Operating Expenses Before Depreciation	49,765,894	53,434,861	(3,668,967)	(7)%
Depreciation	24,998,305	25,675,589	(677,284)	(3)%
Total Operating Expenses	74,764,199	79,110,450	(4,346,251)	(5)%
OPERATING INCOME	10,615,855	5,000,847	5,615,008	112 %
NONOPERATING REVENUES (EXPENSES)				
Investment Earnings	1,498,165	1,937,916	(439,751)	(23)%
Net Increase (Decrease) in FV of Investments	(8,489,292)	—	(8,489,292)	— %
Gain (Loss) on Disposal of Assets	83,284	(562,500)	645,784	(115)%
Amortization of Bond/note Issuance Costs	801	(99,750)	100,551	(101)%
Interest Expense	(8,958,464)	(8,910,458)	(48,006)	1 %
Total Nonoperating Revenues (Expenses)	(15,865,506)	(7,634,792)	(8,230,714)	108 %
Gain (Loss) Before Capital Contributions	(5,249,651)	(2,633,945)	(2,615,706)	99 %
CAPITAL CONTRIBUTIONS				
Grants	2,013,271	1,012,500	1,000,771	99 %
Water Resource Sustainability Program	1,246,506	455,376	791,130	174 %
Developer Infrastructure Contributions	11,982,399	13,633,110	(1,650,711)	(12)%
Developer Will-serve Contributions (Net of Refunds)	3,553,678	2,163,036	1,390,642	64 %
Developer Capital Contributions - Other	8,930,905	7,020,225	1,910,680	27 %
Developer Facility Charges (Net of Refunds)	10,450,248	5,475,999	4,974,249	91 %
Contributions from Others	295,739	150,000	145,739	97 %
Net Capital Contributions	38,472,746	29,910,246	8,562,500	29 %
CHANGE IN NET POSITION	\$ 33,223,095	\$ 27,276,301	\$ 5,946,794	22 %

Truckee Meadows Water Authority

Comparative Statements of Revenues, Expenses and Changes in Net Position
For the nine months ended March 31, 2022

	Actual YTD 2022	Actual YTD 2021	Variance \$	Variance %
OPERATING REVENUES				
Charges for Water Sales	\$ 80,898,449	\$ 80,496,525	\$ 401,924	— %
Hydroelectric Sales	1,459,283	1,883,044	(423,761)	(23)%
Other Operating Sales	3,022,322	1,867,036	1,155,286	62 %
Total Operating Revenues	85,380,054	84,246,605	1,133,449	1 %
OPERATING EXPENSES				
Salaries and Wages	18,745,725	16,593,615	2,152,110	13 %
Employee Benefits	8,102,628	7,280,979	821,649	11 %
Services and Supplies	22,917,541	20,562,487	2,355,054	11 %
Total Operating Expenses Before Depreciation	49,765,894	44,437,081	5,328,813	12 %
Depreciation	24,998,305	24,809,848	188,457	1 %
Total Operating Expenses	74,764,199	69,246,929	5,517,270	8 %
OPERATING INCOME	10,615,855	14,999,676	(4,383,821)	(29)%
NONOPERATING REVENUES (EXPENSES)				
Investment Earnings	1,498,165	2,006,748	(508,583)	(25)%
Net Increase (Decrease) in FV of Investments	(8,489,292)	(2,147,338)	(6,341,954)	295 %
Gain (Loss) on Disposal of Assets	83,284	—	83,284	— %
Amortization of Bond/note Issuance Costs	801	(107,136)	107,937	(101)%
Interest Expense	(8,958,464)	(9,192,031)	233,567	(3)%
Total Nonoperating Revenues (Expenses)	(15,865,506)	(9,439,757)	(6,425,749)	68 %
Gain (Loss) Before Capital Contributions	(5,249,651)	5,559,919	(10,809,570)	(194)%
CAPITAL CONTRIBUTIONS				
Grants	2,013,271	—	2,013,271	— %
Water Resource Sustainability Program	1,246,506	1,190,845	55,661	5 %
Developer Infrastructure Contributions	11,982,399	8,657,287	3,325,112	38 %
Developer Will-serve Contributions (Net of Refunds)	3,553,678	3,823,411	(269,733)	(7)%
Developer Capital Contributions - Other	8,930,905	7,835,082	1,095,823	14 %
Developer Facility Charges (Net of Refunds)	10,450,248	9,681,865	768,383	8 %
Contributions from Others	295,739	—	295,739	— %
Net Capital Contributions	38,472,746	31,221,290	7,251,456	23 %
CHANGE IN NET POSITION	\$ 33,223,095	\$ 36,781,209	\$ (3,558,114)	(10)%



STAFF REPORT

TO: TMWA Board of Directors
THRU: Mark Foree, General Manager
FROM: Matt Bowman, Chief Financial Officer/Treasurer
Sandra Tozi, Senior Financial Analyst
DATE: May 10, 2022
SUBJECT: **Discussion, and action on request for adoption of Resolution No. 304: A resolution to adopt the final budget for the Fiscal Year ending June 30, 2023 and the 2023-2027 Five-Year Capital Improvement Plan**

Recommendation

Staff recommends the TMWA Board approve the proposed Final Budget for the fiscal year ending June 30, 2023 and direct staff to file the adopted Final Budget and related 2023-2027 Capital Improvement Plan (CIP) with the State of Nevada Department of Taxation as required by statute.

Summary

TMWA has prepared the proposed Final Budget for consideration and approval by the TMWA Board. Changes to the tentative budget presented originally at the March 16, 2022 board meeting result in an increase to change in net position of \$2.0m due to higher grant revenue offset by lower hydroelectric revenue and higher salaries and wages and employee benefits expenses. Capital spending for 2023-2027 increased \$27m for a five-year total of \$393.2m.

Discussion

A comparison of the proposed Final Budget to the original approved Tentative Budget is accompanying this report in *Attachments A and B*. Changes to the operating budget include the following –

- Increase in grant revenue - \$3m. This is due to TMWA receiving a \$3m grant as part of the Federal FY2022 Omnibus Appropriations bill. The grant is earmarked to fund the Advanced Purified Water Facility at American Flat, included in the 2023-2027 CIP.
- Decrease in hydroelectric revenue - \$0.8m. Due to lower-than-expected precipitation in the spring of 2022, Truckee River flows are expected to drop below the required flows for operation of the hydro plants in early fall 2022.
- Increase in salaries and wages and employee benefits expense - \$0.2m. Following updated results from TMWA's third-party Labor Market Index study, staff recommends

an increase to both bargaining unit and non-bargaining unit employee wages of 3.55% beginning on or around July 1, 2022.

The primary increase to the five-year CIP came in the Raw Water category for the Advanced Purified Water Facility at American Flat at \$17.0m. An additional \$8.4m increase to Treatment Plant Improvements included an increase of \$5.3m to Orr Ditch Pump Station Rehab and Hydro Facility as well as \$2.3m to Longley Plant HV3 and HV4 Treatment improvements both based on updated construction cost estimates.

The increase of in the five-year CIP resulted in an increase of \$10.2m in customer rate funded projects largely due to increases in updated pricing on various projects.

Two projects within this year's CIP that are not as reliant on internal staffing are the APW Facility at American Flat and the AMI project. The table below shows the impact of these projects on the total CIP. With these projects removed, the total CIP each year is in line with previous years' CIP.

	FY2023	FY2024	FY2025	FY2026	FY2027	Five Year CIP Total
Total Spend by FY	\$ 83,875	\$ 120,970	\$ 88,620	\$ 52,430	\$ 47,300	\$ 393,195
APW Facility at American Flat	(20,000)	(55,000)	(37,000)	(5,000)	-	(117,000)
Automated Meter Infrastructure (AMI)	(2,300)	(5,000)	(6,000)	(6,200)	-	(19,500)
Total Adjusted Spend by FY	<u>\$ 61,575</u>	<u>\$ 60,970</u>	<u>\$ 45,620</u>	<u>\$ 41,230</u>	<u>\$ 47,300</u>	<u>\$ 256,695</u>

These changes in CIP affected the budgeted statement of cash flows for FY 2023. See ***Attachment B***.

TRUCKEE MEADOWS WATER AUTHORITY

Comparative Statements of Revenues, Expenses and Changes in Net Position
Proposed Final Budget

	Final Budget FY 2023	Tent. Budget FY 2023	Change Final v Tent.	Final Budget FY 2022
OPERATING REVENUES				
Charges for Water Sales	\$ 113,142,185	\$ 113,142,185	\$ -	\$ 108,503,854
Hydroelectric Sales	2,407,214	3,177,557	(770,343)	1,837,239
Other Operating Sales	3,861,065	3,861,065	-	2,219,679
Total Operating Revenues	119,410,464	120,180,807	(770,343)	112,560,772
OPERATING EXPENSES				
Salaries and Wages	29,656,188	29,479,887	176,301	26,634,314
Employee Benefits	12,842,853	12,787,228	55,625	11,622,696
Services and Supplies	33,719,064	33,719,064	-	32,188,000
Total Operating Expenses Before Depreciation	76,218,105	75,986,179	231,926	70,445,010
Depreciation	34,628,346	34,628,346	-	34,234,118
Total Operating Expenses	110,846,451	110,614,525	231,926	104,679,128
OPERATING INCOME	8,564,013	9,566,282	(1,002,269)	7,881,644
NONOPERATING REVENUES (EXPENSES)				
Investment Earnings	3,064,024	3,064,024	-	2,583,886
Loss on Disposal of Assets	(1,700,000)	(1,700,000)	-	(750,000)
Debt Issuance Costs	-	-	-	(133,000)
Interest Expense	(11,499,699)	(11,499,699)	-	(11,880,610)
Total Nonoperating Revenues (Expenses)	(10,135,675)	(10,135,675)	-	(10,179,724)
Gain (Loss) Before Capital Contributions	(1,571,662)	(569,393)	(1,002,269)	(2,298,080)
CAPITAL CONTRIBUTIONS				
Grants	3,585,635	585,635	3,000,000	1,350,000
Water Resource Sustainability Program	2,840,000	2,840,000	-	607,168
Developer Infrastructure Contributions	21,903,168	21,903,168	-	18,177,481
Developer Will-serve Contributions (Net of Refunds)	7,245,700	7,245,700	-	2,884,048
Developer Capital Contributions - Other	11,044,199	11,044,199	-	9,360,299
Developer Facility Charges (Net of Refunds)	13,186,258	13,186,258	-	7,301,331
Contributions from Others	94,924	94,924	-	-
Contributions from Other Governments	21,100,000	21,100,000	-	200,000
Net Capital Contributions	80,999,884	77,999,884	3,000,000	39,880,327
CHANGE IN NET POSITION	79,428,222	77,430,491	1,997,731	37,582,247
NET POSITION, BEGINNING PERIOD	848,515,140	848,515,140		
NET POSITION, END OF PERIOD	\$ 927,943,362	\$ 925,945,631		

TRUCKEE MEADOWS WATER AUTHORITY

Statements of Cash Flows

Proposed Final Budget

	Final Budget FY 2023	Tent. Budget FY 2023	Change Final v Tent.	Final Budget FY 2022
OPERATING ACTIVITIES				
Cash Received From Customers	\$ 119,410,464	\$ 120,180,807	\$ (770,343)	\$ 112,560,772
Cash Paid to Employees	(42,499,041)	(42,267,115)	(231,926)	(38,257,010)
Cash Paid to Suppliers	(33,719,064)	(33,719,064)	-	(32,188,000)
Net Cash From Operating Activities	43,192,359	44,194,628	(1,002,269)	42,115,762
CAPITAL AND RELATED FINANCING ACTIVITIES				
Acquisition & Construction of Capital Assets	(83,875,000)	(92,500,000)	8,625,000	(60,125,000)
Interest Paid on Financing	(15,829,559)	(15,829,559)	-	(16,391,528)
Principal Paid on Financing	(16,494,081)	(16,494,081)	-	(13,599,193)
Redemptions of Commercial Paper Notes	-	-	-	(5,500,000)
Grants	3,669,308	669,308	3,000,000	1,900,000
Contributions for Water Resource Sustainability Program	2,840,000	2,840,000	-	607,168
Contributions From Developers-Will-Serve Letters	7,245,700	7,245,700	-	2,884,048
Contributions from Developers - Other	11,044,199	11,044,199	-	9,360,299
Contributions from Developers - Facility Charges	13,186,258	13,186,258	-	7,301,331
Contributions from Others	94,924	94,924	-	-
Contributions from Other Governments	21,100,000	21,100,000	-	200,000
Bond/Note Issuance Costs	-	-	-	(133,000)
Net Cash Used For Capital & Relating Financing Activities	(57,018,251)	(68,643,251)	11,625,000	(73,495,875)
INVESTING ACTIVITIES				
Interest Received	3,064,024	3,064,024	-	2,583,886
Net Cash From Investing Activities	3,064,024	3,064,024	-	2,583,886
NET CHANGE IN CASH AND CASH EQUIVALENTS	(10,761,868)	(21,384,599)	10,622,731	(28,796,227)
CASH AND CASH EQUIVALENTS, BEGINNING PERIOD	216,227,461	216,227,461	-	211,972,331
CASH AND CASH EQUIVALENTS, END OF PERIOD	\$ 205,465,593	\$ 194,842,862	\$ 10,622,731	\$ 183,176,104



Photo: Recharge Feasibility Drilling

Photo By: Christian Kropf, Senior Hydrogeologist

Five Year Capital Improvement Plan

Fiscal Year 2023 - 2027

Truckee Meadows Water Authority is a not-for-profit, community-owned water utility, overseen by elected officials and citizens from Reno, Sparks and Washoe County

Truckee Meadows Water Authority FY 2023 - 2027 Capital Improvement Plan

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INTRODUCTION

The Truckee Meadows Water Authority's (TMWA's) Five-Year Capital Improvement Plan 2023-2027 (CIP), describes all infrastructure construction and major capital outlays that will take place between July 1, 2022 and June 30, 2027. Guidance for identifying and scheduling projects in the CIP is provided by TMWA's 2015-2035 Water Facility Plan (WFP) and the 2020-2040 Water Resource Plan (WRP).

TMWA is a joint powers authority formed in November 2000, pursuant to a Cooperative Agreement (as amended and restated as of February 3, 2010, the "Cooperative Agreement") among the City of Reno, Nevada ("Reno"), the City of Sparks, Nevada ("Sparks") and Washoe County, Nevada (the "County"). The Authority owns and operates a water system (the "Water System") and develops, manages and maintains supplies of water for the benefit of the Truckee Meadows communities. On January 1, 2015, TMWA, the Washoe County Water Utility (WCWU) and South Truckee Meadows General Improvement District (STMGID) consolidated to create a regional water system under TMWA. TMWA has a total of 162 square miles of service area, which includes the cities of Reno and Sparks and other surrounding populated areas of the County (except certain areas in the vicinity of Lake Tahoe and other small areas bordering California). TMWA has no authority to provide water service outside of its service area; however, may provide service in the future to developments that are annexed into its service area.

The CIP incorporates a comprehensive compilation of water system improvements for TMWA. A major feature of the CIP is the construction of several projects that will expand the conjunctive use of the region's water resources. The philosophy behind conjunctive use of local water resources is to maximize the use of surface water while preserving the integrity of groundwater resources which are drawn upon during periods of persistently dry weather. Another aspect of the CIP is to expand the Aquifer Storage and Recovery Program (ASR Program) which is the recharge of groundwater basins with treated surface water, and explore the possibilities related to Advanced Purified Water (APW). In addition, this CIP includes several major projects to extend full conjunctive use water service to the Verdi area, made possible by approved development and cost effective oversizing. The estimated costs of the new backbone water facilities is \$20.0 million and is being borne largely by regional developments in the area.

The CIP constitutes an essential component in TMWA's system of planning, monitoring and managing the activities of purveying water and generating hydroelectric power. The CIP is incorporated into a broader, constantly-updated Five-Year Funding Plan ("Funding Plan") for a comparable period. This Funding Plan will determine adequate levels and sources of funding for projects contained in the CIP.

The 2022-2026 Funding Plan indicates a nominal funding gap in each year, however, due to adequate treasury and ongoing revenues from various sources, TMWA can fund the CIP.

Water Conservation TMWA is a steward of the region's water resources and promotes the efficient use of water in drought and non-drought years. Due to TMWA's ongoing conservation programs, among other factors, municipal residential per capita demand has decreased by 30% since the early 2000s, helping to offset total water use as TMWA's customer base has grown by approximately 30%. Capital spending represents a key aspect of TMWA's conservation program. Projects such as meter replacements, conjunctive use and recently the Advanced Purified Water Facility at American Flat represent projects which help to ensure TMWA has the appropriate infrastructure in place to allow for efficient water use. Specifically, projects included in the CIP having significant conservation impacts are as follows: Advanced Purified Water Facility at American Flat (\$117.0 million), Automated Meter Infrastructure (\$19.5 million), Well Head TTHM Mitigation (\$2.1 million), STMGID Conjunctive Use Facilities (Arrowcreek BPS) (\$3.5 million), and Lazy 5 Pump Station (\$2.0 million).

The CIP includes total spending of \$393.2 million with approximately 53.0% or \$208.2 million dedicated to upgrades or replacement of existing infrastructure, and approximately 39.9% or \$156.9 million allocated to construction of new water system capacity projects, conjunctive use construction projects, retrofit of remaining unmetered services, and potential opportunistic acquisition of water rights. Construction and capital outlays paid for out of STMGID reserve funds are estimated to be approximately 0.9% or \$3.5 million of total spending over fiscal years 2023-2027. Of the total projected spending over the next five years 5.3% or \$20.8 million is considered contingency spending which is dependent on certain events occurring to trigger spending. The \$393.2 million in projected spending is grouped into broad categories of improvements and spending outlays. These categories are described below with detailed project descriptions to be found in the Project Description Section.

Raw Water Supply Improvements contains 33.0% or approximately \$129.9 million of total spending in the CIP. Comprising nearly all of the spending in this category is the construction of an Advanced Purified Water (APW) Facility at American Flat which will be built as a follow up to the OneWater NV advanced purified water feasibility study, and will be a joint effort with other agencies. Through an interlocal agreement, TMWA has partnered with City of Reno who will reimburse TMWA for 70% of the construction costs. There will be immediate benefit to City of Reno resulting from increased capacity at the Reno Stead Water Reclamation Facility. Other projects in this category include improvements to the Highland Canal/Siphon raw water conveyance infrastructure, upstream storage improvements for Donner Lakes where TMWA stores Privately-Owned Stored Water (POSW) and expenses associated with the storage and implementation of the Truckee River Operating Agreement (TROA).

Ground Water Supply Improvements contains 4.6% or approximately \$18.2 million of total spending in the CIP. These projects focus on preserving existing well capacities, drilling and equipping of new wells and at times complete replacement of existing wells.

Treatment Plant Improvements contains 11.9% or approximately \$46.9 million of total spending in the CIP. The Orr Ditch pump station/Hyrdo Facility project will increase redundancy and reliability by enhancing the Truckee River source of supply to the Chalk Bluff Water

Treatment Plant and directly offset power costs. Other spending in this category targets fix and finish projects with the primary focus on the Chalk Bluff and Glendale Surface Water Treatment Plants located on the Truckee River. Other improvements include installation of a new disinfection process at two wells historically treated by the Longley Lane ground water treatment plant and a complete upgrade of the Supervisory Control and Data Acquisition (SCADA) system which provides centralized automated system control and data storage for the distribution system and treatment plants.

Distribution System Pressure Improvements contains 11.1% or approximately \$43.5 million of total spending. This spending primarily includes pump and pressure regulating station rebuilds and new construction, correction of pressure or fire flow deficiencies, as well as reconstruction of pressure regulating valves.

Water Main Distribution & Service Line Improvements contains 15.0% or approximately \$58.8 million of total spending in the CIP. These improvements include replacement of aged water mains reaching end of service life, installation of new mains for new and expanded service, water main oversizing and extensions, off-river supply improvements, and conjunctive use projects to extend surface water supplies to the areas that rely heavily on year round groundwater pumping. This last set of projects furthers the conjunctive use philosophy of water resource management and includes the Boomtown water system improvements.

Potable Water Storage Improvements contains 10.4% or approximately \$41.0 million of total spending in the CIP. These projects are comprised mainly of new treated water storage tank to increase system redundancy and reliability (Sun Valley #2 Tank and Caughlin 2 Tanks) and construction to serve new and expanded service (STMGID Tank East Zone 11 Tank), some replacement of existing treated water tank capacity as well as systematic recoating of treated water tank interiors and exteriors to extend service life of these facilities.

Hydroelectric Improvements contains 1.9% or approximately \$7.5 million of total spending in the CIP. These improvement center on the three run-of-river hydroelectric facilities currently owned by TMWA. Efforts on these facilities focus primarily on flume, forebay, diversion and canal improvements as well as equipment upgrades.

Customer Service Outlays contains 5.6% or approximately \$22.0 million of total spending in the CIP. The majority of spending in this category is for Automated Meter Infrastructure (AMI) meter replacements, providing more accurate and real time usage information which can be leveraged for billing, conservation and cost efficiencies. Also, in this category is a spending provision for new business meters which is funded by development.

Administrative Outlays contains 2.4% or approximately \$9.5 million of total spending in the CIP. These outlays are primarily for the purchase of heavy and light vehicles, excavation equipment and fleet upgrades. Other spending in this category are for asphalt rehabilitation and

replacement at various locations. Also, in this category is spending for security improvements such as fencing, intrusion detection, security cameras, lighting.

Special Programs Funded by Development include outlays for opportunistic water rights purchases. They are separated from a presentation standpoint because in the case of water right acquisitions, spending is currently driven by pricing opportunity. This comprises 3.2% or approximately \$12.5 million of total spending in the CIP.

Former STMGID System Improvements are separated from a presentation standpoint because projects in this category are funded by the STMGID reserve, which TMWA acquired through the acquisition of former STMGID. It contains 0.9% or approximately \$3.5 million of total spending in the CIP. Improvements in this category focus on conjunctive use facilities. This reserve fund is expected to be depleted by the end of the five year plan.



Photo: Pyramid Tank Rehab Project

Photo By: Karen Meyer, Construction Manager Coordinator

DEFINITIONS

Capital Improvement Program Definitions

The Five-Year CIP is a planning and budgeting tool, which provides information about TMWA's infrastructure needs for a five-year time frame. Each year, the list of projects is reviewed for cost and priority. New projects may be added and other projects delayed or deleted entirely. Since most projects are mandatory or necessary, deletion of a project would be rare with the exception of contingency spending. However, capital spending plans must remain flexible, and it is often necessary to take revisions to the approved fiscal year's CIP back to the TMWA Board for approval. If construction or outlays can be deferred, TMWA will defer spending in order to preserve cash reserves, regardless whether or not there are difficult economic times. These decisions are made on a case by case basis.

Generally, capital improvements/outlays are defined as physical assets, constructed or purchased, that have a useful life greater than one year and a cost of \$5,000 or more.

Definition of Capital Outlays

"Capital Outlays," which are in TMWA's capital budget, include construction projects that improve the life of current TMWA infrastructure, or are new additions to TMWA infrastructure, as well as computer equipment and software, vehicles, and heavy equipment needed to support TMWA's operations. These items are generally found in the Administrative category of projects. For the Customer Service category, these outlays involve meter installations and related infrastructure, and acquiring meter reading equipment.

PRIORITIZATION OF PROJECTS/OUTLAYS

TMWA may not have sufficient funding to meet all its capital needs each year or may divert funding to meet unexpected capital improvements. If such conditions arise, projects are prioritized based on the effect each project has on TMWA's ability to meet customer demand and maintain water system reliability. TMWA's Five-Year Funding Plan is used to analyze total spending, identify various funding alternatives, and determine whether or not water rate adjustments will be required.

The priority categories represent a relative degree of need for any particular project and are described below.

- * **PRIORITY 1 MANDATORY:** These are considered absolutely required, and are the highest priority of all capital projects. Mandatory projects include those in final design or already under construction, or those required by legislation or regulation for protection of public health and safety. These projects are generally found in the first fiscal year of the CIP. Water demands or infrastructure conditions are such that if the project is not completed TMWA runs the risk of eventually being unable to reliably provide water service to its existing customers and/or new and expanded service, or incur extended outages.
- * **PRIORITY 2 NECESSARY:** A project that is important for providing water service to customers, yet timing of construction or spending outlay is not as critical as a mandatory project. These projects are required and are generally found in the last four years of the CIP. External factors such as the pace of new development or the condition of existing infrastructure may delay or accelerate the timing of project construction.
- * **PRIORITY 3 CONTINGENCY:** These projects or capital outlays are not immediately critical to the operation of the water system. Expenditures in this category generally require a business case study or specific criteria to be met before spending can occur. If such criteria are not met, then spending may or may not be justified. Also, some projects are deferrable if spending is required in an area of higher priority. Even though these projects and outlays are in the CIP the likelihood that spending will occur may be remote and is based upon future conditions that are difficult to predict.

FUNDING OF CAPITAL SPENDING

Funding Sources

The CIP will rely on various funding sources to pay for capital projects/capital outlays. TMWA relies heavily on revenues generated from water sales, hydroelectric, and other operating sales to fund the majority of projects. Developer contributions have historically been an important funding source for certain construction projects for new and expanded water system capacity. Investment income is also available to augment other revenue sources but is minor in relation to other funding sources. Funding from developer contributions can vary year to year and dependent on the local economy and pace of new construction in TMWA's service territory. For this reason, TMWA does not rely on these fees to fund operations or fund annual principal and interest payments on TMWA's outstanding debt. TMWA may rely on the issuance of debt to fund large levels of capital spending in a particular period. Although, historically, TMWA has funded certain capital projects through the issuance of debt, there is no plan to issue debt to fund any portion of this CIP.

Developer Contributions

TMWA looks to the development community for developer contributions in the form of system development charges or direct reimbursements to fund capital expenditures related to new or expanded water service, including pump station construction or expansions and feeder main extension projects. In June 2003, the TMWA Board adopted facility charges to pay for new treatment/supply capacity projects and new storage capacity projects. TMWA began collecting these facility charges in January 2004. Under TMWA's Rule 5 these proceeds are used to support new capacity construction. Rule 7 governs the purchase of water rights and reimbursement by developers for issuance of will-serve commitments for water service. However, because of the timing of certain growth driven capital projects, additional financial resources may be called upon as needed. The most recent update to the water system facility charges, which updated area fees, supply and treatment fees, as well as storage unit costs was approved by the TMWA Board in August, 2019 with an effective date of January, 2022. These fees are subject to periodic review for funding adequacy.

Financing Background

Revenue bond issuance has been an integral part of funding construction spending. TMWA has also taken advantage of lower rate, subordinated debt financing obtained through the Drinking Water State Revolving Loan Fund (DWSRF) and a tax-exempt commercial paper program (TECP) due to lower cost of capital and repayment subordination features of these funding vehicles. Federal and State Grants and loan forgiveness programs have also been identified in the past to fund projects. In the event customer water sales and developer funding is not sufficient to cover immediate infrastructure needs, TMWA maintains the ability to access the credit market and issue debt. However, TMWA has no intent to issue debt to fund any portion of this CIP.

TMWA has been able to reduce debt by over \$117.1 million, and 23% during the last 5 years, and currently has no plan to increase debt to fund projects in this plan.

Rule 5 and Rule 7 Fees

These fees are collected from the development community. Rule 5 fees are paid by developers to TMWA for the construction of new water feeder mains, new treatment/supply capacity, new storage capacity, and for new or rebuilt pump stations to meet demand resulting from new and expanded service. Rule 7 Fees are derived from will-serve sales to development. TMWA historically purchased water rights on the open market and reserves these rights for will-serve letters to be sold to development. TMWA also recovers the applicable administrative and financing costs with the sale of each will-serve. The title to water rights are retained by and dedicated to TMWA. TMWA has sufficient inventory of water rights to meet the demands for new and expanded service for the foreseeable future.

Water Meter Retrofit Fees

Pursuant to Resolution 272 passed by the Board of Directors on January 16, 2019, the Water Meter Retrofit Fee was replaced by the Water Resource Sustainability Fee. The remaining balance of \$5.7 million will be allocated entirely to the Automated Meter Infrastructure project.

Water Resource Sustainability Fund Fees

Resolution 272, passed by the Board of Directors on January 16, 2019, broadened the purpose of the Water Meter Retrofit Fee to support projects such as expanded conjunctive use, aquifer storage and recovery, demonstration and validation of advanced purified water treatment processes, future water resource identification and acquisition, and other projects that enhance water resource sustainability and drought resiliency. The fee has been reduced from \$1,830 to \$1,600 for each acre-foot of demand when will-serve commitments based on surface water right dedications are issued for new or expanded service.

Capital Contributions from Other Governments

TMWA is a water wholesaler to the Sun Valley General Improvement District (SVGID). From time to time, new infrastructure must be constructed to service this retail water-service provider. There are no expectations of any need for reimbursement from this source in the CIP although historically SVGID has made contributions to TMWA.

Reserves from the Water Utility Consolidation

TMWA, the WCWU and STMGID consolidated on January 1, 2015. As a result of the consolidation, the respective treasuries of the WCWU and STMGID were transferred to TMWA.

The WCWU treasury that was transferred to TMWA amounted to approximately \$43.4 million while the STMGID treasury transferred to TMWA was approximately \$15.7 million of which \$2.7 million remains. These cash and investment reserves will continue to be used to make necessary improvements in the former water utility service areas including conjunctive use enhancements.

Other Resources

One method of generating additional funds for capital improvements is to increase existing fees/charges or to add new fees/charges. However, future increases are expected to be nominal if TMWA is able to meet revenue requirements and maintain bond coverage ratios that will suffice to maintain strong investment-grade credit ratings. TMWA has obtained many benefits of Aa2 from Moodys, AA+ from S&P, and in March, 2022 upgraded to AAA from Fitch. The Board approved a five-year customer water rate plan in early 2017 which included a water rate increase of 3.0% in May of 2017 and 2018. TMWA Board deferred the 2.5% rate increases scheduled for 2019 through 2021 to 2020 through 2022, effectively delaying the rate increase plan by one year. Due to the pandemic, the Board again deferred the 2.5% water rate increases scheduled for 2020 through 2022 to 2021 through 2023. Water rate increases are essential for TMWA to maintain sound credit ratings and to preserve access to opportunities in the capital markets.

FISCAL YEAR 2023 CAPITAL SPENDING-THE CAPITAL BUDGET

TMWA expects to spend \$83.9 million in fiscal year 2023, the first year of the FY 2023-2027 CIP. Of this total, \$42.8 million will be funded by customer rates for water system rehabilitation, hydroelectric improvements, pressure system improvements, water main distribution service line improvements, and administrative and customer service outlays. Another \$28.8 million will be funded by developer fees for water system expansion, limited opportunistic acquisition of water rights. The water meter retrofit fund will pay for \$2.5 million for meter replacements, and the sustainability fund will pay for \$2.1 million in projects. Insurance settlements will pay for \$5.0 million in hydroelectric improvements, and STMGID reserves account for \$2.7 million of improvements in the STMGID area.

SUMMARY OF PROJECTS FOR THE FISCAL YEAR 2023 BUDGET

TMWA has established the following projects for the capital budget in fiscal year 2023 (Amounts presented in thousands of dollars):

Summary of Projects for FY 2023	Amount
Raw Water Supply Improvements	
Highland Canal-Upgrades-Downstream	225
Highland Canal-Upgrades-Diversion to Chalk Bluff	500
TROA Drought Storage / Implementation	150
Donner Lake Outlet Improvements Phase 2	150
Advanced Purified Water Facility at American Flat	20,000
Washoe Lake System Improvements	100
Total Raw Water Supply	21,125
Ground Water Supply Improvements	
Well Rehabilitation Improvements	200
Double Diamond #5 and Equipping	50
Well Fix & Finish	350
Brush Well and Spring Creek 5	1,000
Well Head TTHM Mitigation	100
Spring Creek Well #10 - Donovan	150
Geothermal Fluid Monitoring Well	100
Spring Creek Well 9 (Spring Creek 4 Replacement)	760
Spring Creek Wells PH Adjustment	750
STMGID Well #1 Re Drill and Equipping	200
Total Ground Water Supply	3,660
Treatment Plant Improvements	
Chalk Bluff Treatment Plant Improvements	550
Glendale Treatment Plant Improvements	200
Mt Rose Treatment Plant Efficiency Improvements	500

Truckee Meadows Water Authority FY 2023 - 2027 Capital Improvement Plan

Summary of Projects for FY 2023 (continued)	
Chalk Bluff Filter Underdrains	800
Glendale Lighting Upgrade	250
Orr Ditch Pump Station Rehab and Hydro Facility	15,000
Truckee Canyon Water Treatment Improvements	100
Lightning W Treatment Improvements	20
SCADA Rehab / Plant Operating Software	1,000
Longley Plant HV 3 and HV 4 Treatment Improvements	695
Longley Plant Retrofit	250
Spanish Springs Nitrate Treatment Facility	250
Chalk Bluff Electrical System Upgrades	150
Total Treatment Plant	19,765
Pressure Improvements	
Pressure Regulators Rehabilitation	1,000
Land Acquisitions	250
Pump Station Oversizing	100
Pump Station Rebuilds, Rehabilitations	50
Standby Generator Improvements	50
PSOM Standby Generator Additions	100
Idlewild Booster Pump Station Improvements	100
Spanish Springs #1 Pump Zone Intertie	600
STMGID Tank #4 Booster Pump Station/Transmission Line	100
Lazy 5 Low Head Pump Station and Mains	1,000
Common (Stonegate) Booster Pump Station	1,100
Caughlin 5C Pump and Motor Replacement	150
7th Street High and Low BPS Replacements	1,300
STMGID NAC Deficiencies - Upper Toll	500
Verdi 1 BPS	1,750
Santerra Quillici 1 BPS	1,150
Silver Hills BPS	200
Upper Markridge 1 Pressure Improvements	150
Orrcrest PRS	150
Total Pressure Improvements	9,800
Water Main-Distribution-Service Line Improvements	
Street & Highway Main Replacements	4,200
5th, 6th & 7th St Water Main Replacements	1,170
Wright Way, E St, 5th, 6th & 7th Replacements	1,820
Oddie Wells Main Replacement	1,560
Spring Creek South Zone Conversion	600
Booth, Sharon Way, Monroe 24" Main Replacements	500
Mount Rose 5 Distribution/Pressure Improvements	50
Goldenrod Main	50
Boomtown Water System Improvements	500
Lemmon Valley Sand Yard	530

Truckee Meadows Water Authority FY 2023 - 2027 Capital Improvement Plan

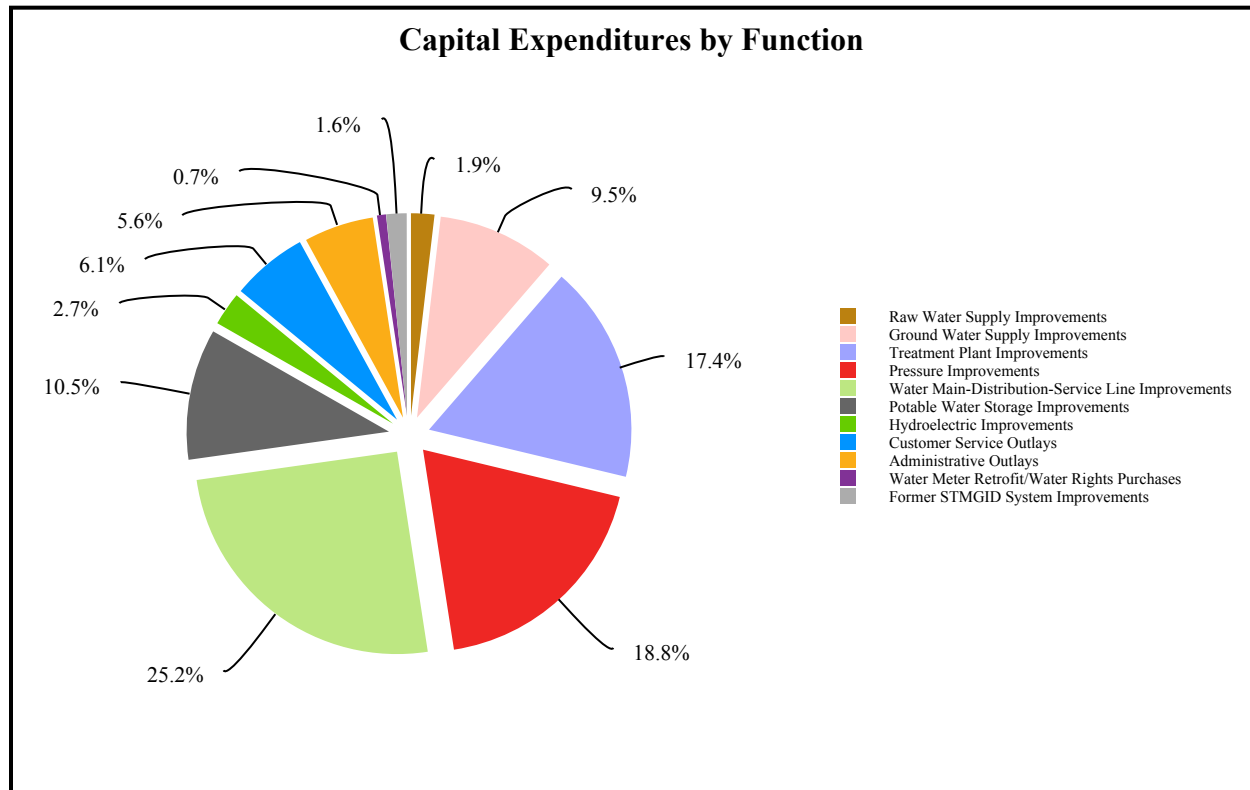
Project Summary for FY 2023 (continued)	Amount
South Truckee Meadows Capacity Improvements	200
Rock & Capital Main Tie	200
Total	11,380
Potable Water Storage Improvements	
Storage Tank Recoats, Access, Drainage Improvements	3,500
Highland Reservoir Tank	1,000
US 40 Tank and Feeder Main	2,150
Lemmon Valley Tank #1 Replacement and Patrician PRS	250
Hidden Valley Tank #4 Outage Improvements	250
Total Potable Water Storage	7,150
Hydroelectric Improvements	
Forebay, Diversion, and Canal Improvements	100
Washoe Plant_Turbine Rebuild and Rebuild/Replacement Unit 1	250
Washoe Plant_Turbine Rebuild and Rebuild/Replacement Unit 2	250
Total Hydroelectric	600
Customer Service Outlays	
New Business Meters	100
Mueller Pit Replacements former Washoe County	125
Galvanized / Poly Service Line Replacements	250
AMI Automated Meter Infrastructure	2,300
Total Customer Service Outlays	2,775
Administrative Outlays	
GIS/GPS System Mapping Equipment	45
IT Server Hardware	45
IT Network Security Upgrades	70
IT Physical Access Security Upgrades	60
Crew Trucks / Vehicles	900
Emergency Management Projects	150
System Wide Asphalt Rehabilitation	200
Physical Access Control System Upgrade	200
Total Administrative Outlays	1,670
Special Projects Funded by Development	
Water Right Purchases	2,500
Total Special Projects	2,500
Former STMGID System Improvements	
STMGID Conjunctive Use Facilities - Arrowcreek BPS	3,450
Total STMGID System Improvements	3,450
Total Capital Spend for FY 2023	83,875

Detailed project descriptions are provided for all projects in the CIP. These descriptions cover the fiscal year 2023 capital budget as well as the four additional years from 2024-2027.

CAPITAL EXPENDITURES BY FUNCTION

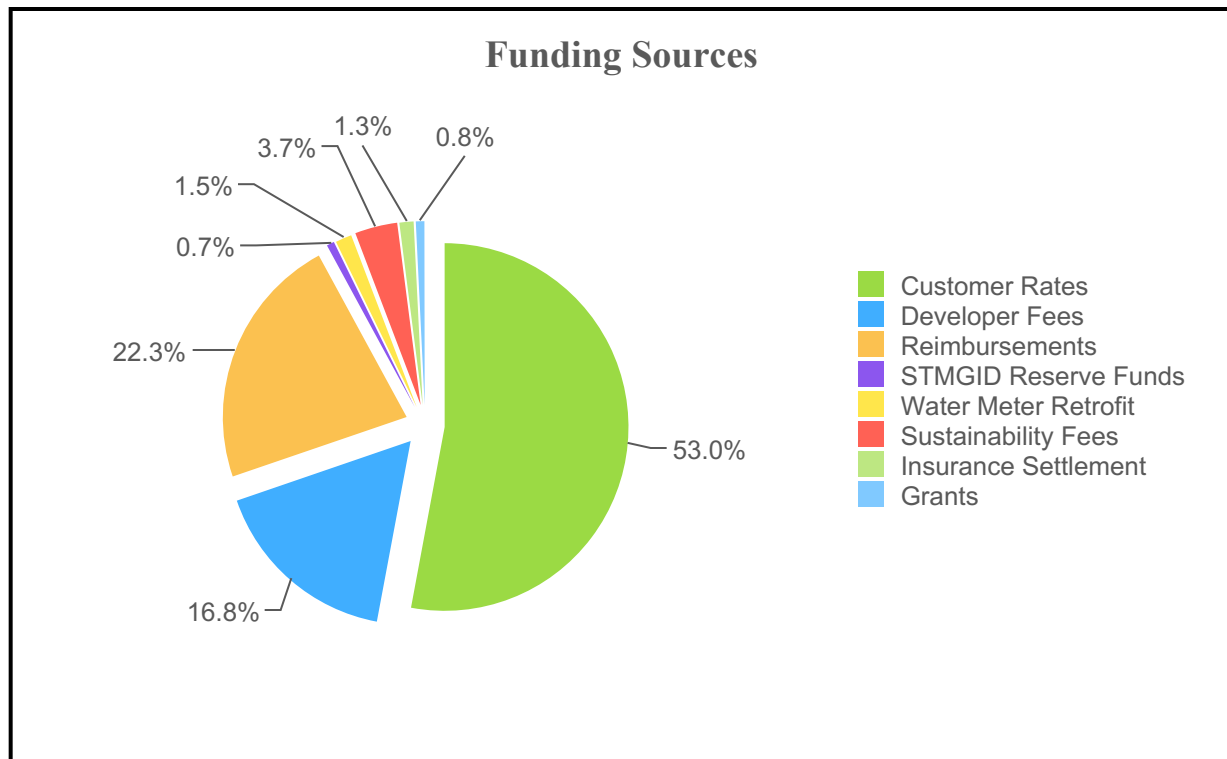
(Amounts in thousands of dollars)

Summary of Capital Expenditures by Function	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
Raw Water Supply Improvements	21,125	56,125	40,325	8,675	3,675	129,925
Ground Water Supply Improvements	3,660	4,370	3,190	2,610	4,350	18,180
Treatment Plant Improvements	19,765	11,485	3,705	2,195	9,700	46,850
Distribution System Pressure Improvements	9,800	10,520	9,260	7,930	6,010	43,520
Water Main Distribution Service Line Improvements	11,380	12,120	12,245	11,590	11,500	58,835
Potable Water Storage Improvements	7,150	10,180	9,120	7,155	7,440	41,045
Hydroelectric Improvements	600	6,250	250	250	100	7,450
Customer Service Outlays	2,775	5,550	6,475	6,675	475	21,950
Administrative Outlays	1,670	1,870	1,550	2,850	1,550	9,490
Water Meter Retrofit / Water Rights Purchases	2,500	2,500	2,500	2,500	2,500	12,500
Sub-Total TMWA Construction Spending & Outlays	80,425	120,970	88,620	52,430	47,300	389,745
Former STMGID System Improvements	3,450	—	—	—	—	3,450
Total Projected Capital Spending	83,875	120,970	88,620	52,430	47,300	393,195



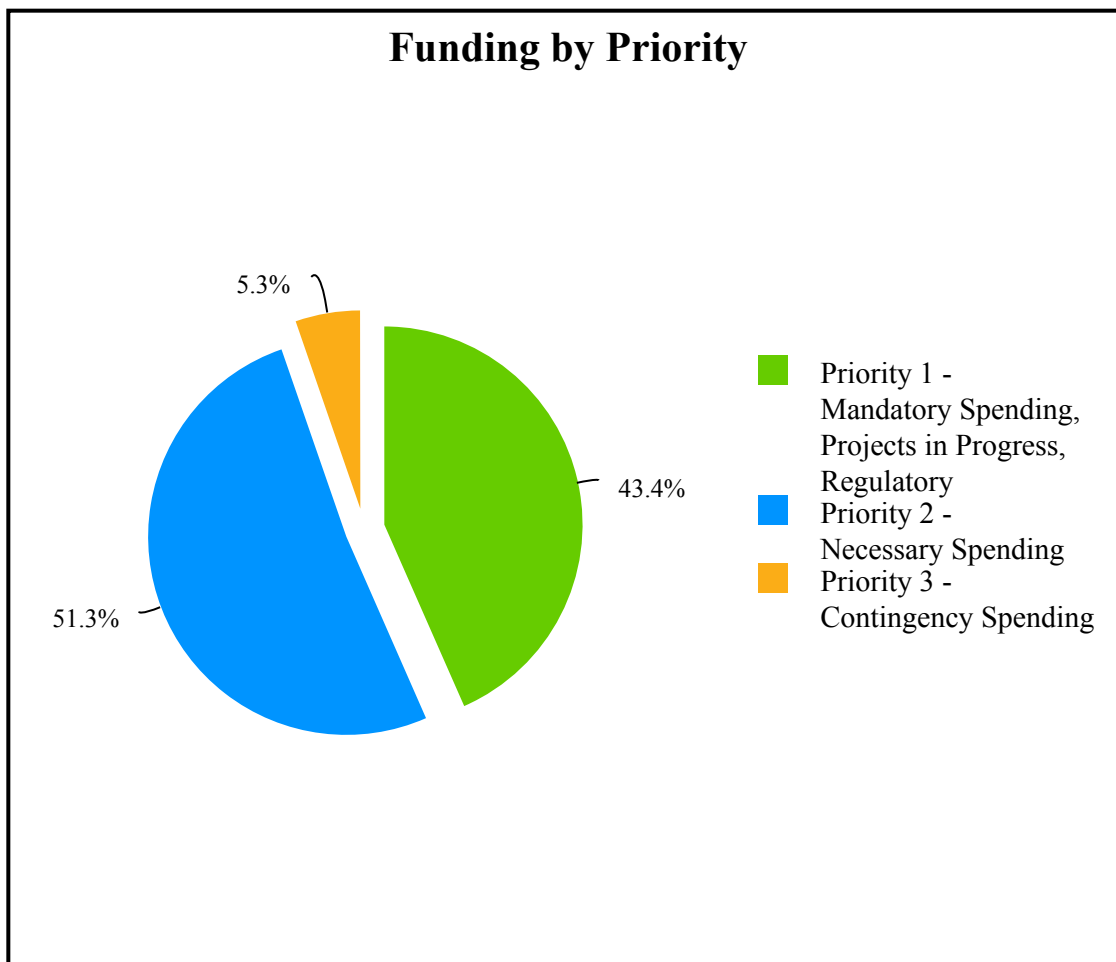
PRELIMINARY FUNDING PLAN
FUNDING SOURCES
 (Amounts in thousands of dollars)

Summary of Funding Sources	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
Customer Rates	42,785	46,293	40,651	42,854	35,616	208,199
Developer Fees	9,700	22,816	16,879	5,226	11,434	66,055
Reimbursements	16,100	41,800	26,400	3,500	—	87,800
STMGID Reserves	2,700	—	—	—	—	2,700
Water Meter Retrofit / Water Rights Purchases	2,500	3,211	—	—	—	5,711
Sustainability Fees	2,090	6,850	4,690	850	250	14,730
Insurance Settlement - Applied to Orr Ditch Hydro	5,000	—	—	—	—	5,000
Grants	3,000	—	—	—	—	3,000
Total Projected Capital Spending	83,875	120,970	88,620	52,430	47,300	393,195



FUNDING BY PRIORITY (Amounts in thousands of dollars)

Summary of Funding by Priority	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
Priority 1 - Mandatory Spending, Projects in Progress, Regulatory	37,955	41,400	33,420	33,365	24,575	170,715
Priority 2 - Necessary Spending	41,895	74,770	51,225	15,040	18,750	201,680
Priority 3 - Contingency Spending	4,025	4,800	3,975	4,025	3,975	20,800
Total Projected Capital Spending	83,875	120,970	88,620	52,430	47,300	393,195



PROJECT FUNCTIONS AND DESCRIPTIONS
RAW WATER SUPPLY IMPROVEMENTS
Summary

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
3	Customer Rates	Highland Canal- Upgrades-Downstream	225	225	225	225	225	1,125
1	Customer Rates	Highland Canal- Upgrades-Diversion to Chalk Bluff	500	500	2,500	100	100	3,700
1	Customer Rates	TROA Drought Storage / Implementation	150	100	100	100	100	550
2	Customer Rates	Donner Lake Outlet Improvements Phase 2	150	150	250	3,000	3,000	6,550
2	Developer Fees / Sustainability Fees / Grants/ Reimbursements	Advanced Purified Water Facility at American Flat	20,000	55,000	37,000	5,000	—	117,000
1	Customer Rates	Washoe Lake System Improvements	100	150	250	250	250	1,000
Subtotal Raw Water Supply			21,125	56,125	40,325	8,675	3,675	129,925

Project Locations: Map of all *Raw Water Supply Improvements* projects are highlighted in the following map.

Truckee Meadows Water Authority FY 2023 - 2027 Capital Improvement Plan



Raw Water Supply Improvements Highland Canal-Upgrades-Downstream

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
3	Customer Rates	Highland Canal-Upgrades-Downstream	225	225	225	225	225	1,125

PROJECT DESCRIPTION: The improvements reflected in this capital project item are for betterments along the canal downstream of the Chalk Bluff Water Treatment Plant to the Rancho San Rafael Park. Approximately 2,000 feet of “smart ditch” (a molded plastic trapezoidal channel section) has been installed downstream of Chalk Bluff in recent years. This product reduces leakage and maintenance and it is planned to continue to extend the installation in the future. Other efforts are rehabilitative in nature and may address access and security concerns.

SCHEDULE: Projects are identified and prioritized on an annual basis.



Raw Water Supply Improvements

Highland Canal – Upgrades – Diversion to Chalk Bluff

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Highland Canal-Upgrades-Diversion to Chalk Bluff	500	500	2,500	100	100	3,700

PROJECT DESCRIPTION: These improvements are for the stretch of canal between the diversion on the Truckee River and Chalk Bluff Water Treatment Plant. The proposed spending is to secure the canal from trespass to enhance public safety and prevent encroachment on TMWA property. TMWA will also complete fencing along the canal for public safety, install security cameras and access barriers. The proposed FY 2023 budget is for replacement of the existing 54-inch siphon pipe under the Truckee River just downstream of the diversion installed in 1954.

SCHEDULE: Projects are identified and prioritized on an annual basis.



Raw Water Supply Improvements TROA Drought Storage/Implementation

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	TROA Drought Storage / Implementation	150	100	100	100	100	550

PROJECT DESCRIPTION: TROA became effective and TMWA began implementation officially on December 1, 2015.

SCHEDULE: Ongoing budget under TROA implementation is for additional stream gauges in new locations as required, as well as improving the monitoring capabilities of existing gauges as needed on an annual basis. Other smaller capital improvements are related to the operation of reservoir sites.



Raw Water Supply Improvements Donner Lake Outlet Improvements Phase 2

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Donner Lake Outlet Improvements Phase 2	150	150	250	3,000	3,000	6,550

PROJECT DESCRIPTION: Dredging of a portion of the Donner Lake outlet channel was completed in FY2019. The project was scaled back to fit within the California Environmental Quality Act emergency permitting requirements. Additional work is required to extend and improve the outlet channel further into the lake, including possible bank stabilization improvements to minimize future dredging requirements.

SCHEDULE: Permitting and preliminary design will be conducted over the next three years. Construction of improvements is scheduled to begin in FY 2026.



Raw Water Supply Improvements

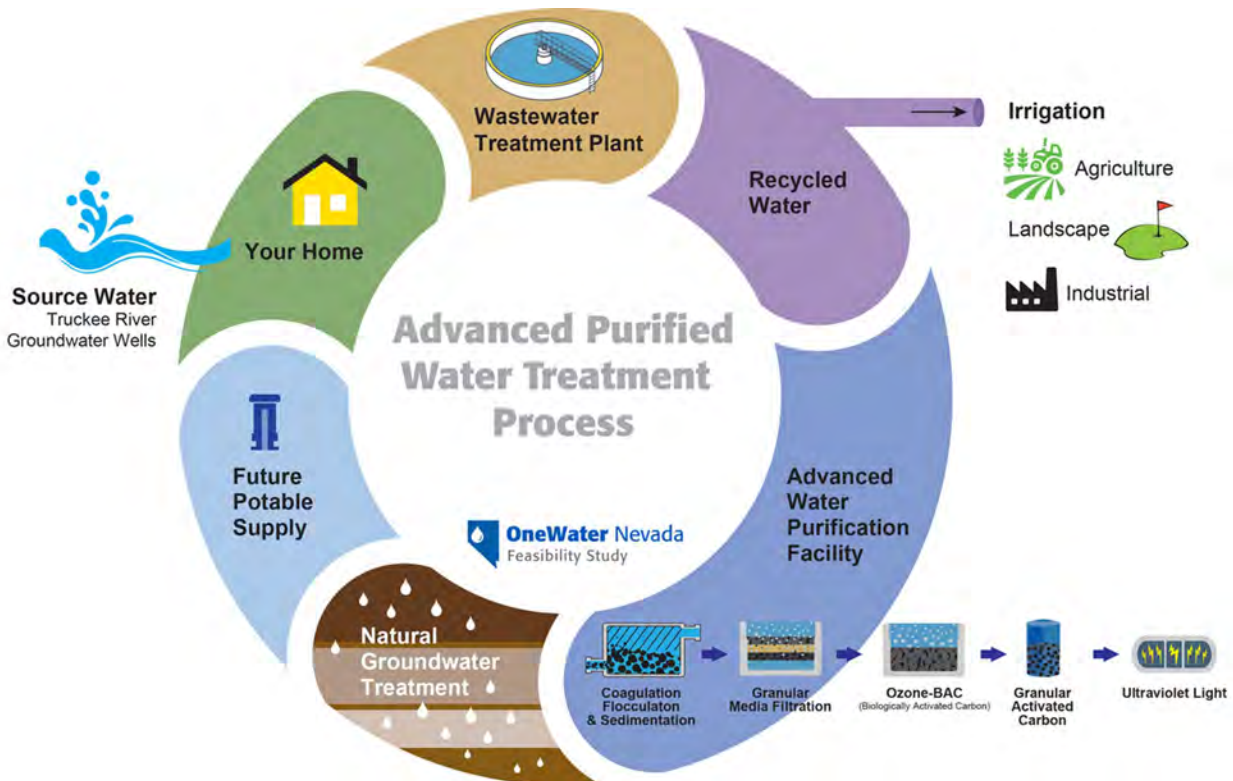
Advanced Purified Water Facility at American Flat

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Developer Fees / Sustainability Fees / Grants/ Reimbursements	Advanced Purified Water Facility at American Flat	20,000	55,000	37,000	5,000	—	117,000

PROJECT DESCRIPTION: The Advanced Purified Water Facility at American Flat will be Nevada’s first Advanced Purified Water project achieving category A+ reclaimed water quality. Category A+ reclaimed water is suitable for all Nevada water recycling practices, including augmenting groundwater aquifers. The Project’s core element is a 2 million gallons per day (MGD) advanced purified water facility (APWF) producing 2,000 acre-feet (AF) of water annually for groundwater augmentation to provide a sustainable regional drought proof supply and crucially enhance the region’s water supply resiliency to help address future climate change impacts. TMWA is partnering with City of Reno who will be reimbursing TMWA for 70% of the total construction costs of the project.

SCHEDULE: Construction for this project will begin in FY 2023.



Raw Water Supply Improvements Washoe Lake System Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Washoe Lake System Improvements	100	150	250	250	250	1,000

PROJECT DESCRIPTION: Improvements as necessary to Washoe Lake Dam and related infrastructure to monitor, capture, store and deliver raw water as necessary to meet regional water supply objectives.

SCHEDULE: Projects are identified and prioritized on an annual basis.



GROUND WATER SUPPLY IMPROVEMENTS

Summary

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Well Rehabilitation Improvements	200	200	200	200	200	1,000
2	Developer Fees	Double Diamond #5 and Equipping	50	450	—	—	60	560
2	Developer Fees	Callamont Well South Equipping	—	60	1,140	—	—	1,200
2	Customer Rates	Air Guard Well Replacement Equipping	—	—	—	—	1,100	1,100
1	Customer Rates	Lemmon Valley Well #8 Replacement	—	250	1,000	—	—	1,250
1	Customer Rates	Well Fix & Finish	350	350	350	350	350	1,750
1	Customer Rates	Brush Well Replacement and Spring Creek 8	1,000	—	—	1,500	—	2,500
1	Customer Rates / Sustainability Fees	Well Head TTHM Mitigation	100	500	500	500	500	2,100
2	Developer Fees	Callamont Well North Equipping	—	—	—	60	1,140	1,200
1	Developer Fees	Spring Creek Well #10 - Donovan	150	1,060	—	—	—	1,210
1	Customer Rates	Fish Springs Ranch TDS Monitoring Wells	—	250	—	—	—	250
1	Customer Rates	Geothermal Fluid Monitoring Well	100	—	—	—	—	100
1	Customer Rates	Spring Creek Well 9 (Spring Creek 4 Replacement)	760	1,000	—	—	—	1,760
1	Customer Rates	Spring Creek Wells pH Adjustment	750	250	—	—	—	1,000
2	Customer Rates	STMGID Well #1 Re-Drill and Equipping	200	—	—	—	1,000	1,200
Subtotal Ground Water Supply			3,660	4,370	3,190	2,610	4,350	18,180

Project Locations: Map of all *Ground Water Supply Improvements* projects are highlighted in the following map.

Truckee Meadows Water Authority FY 2023 - 2027 Capital Improvement Plan



Ground Water Supply Improvements Well Rehabilitation Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Well Rehabilitation Improvements	200	200	200	200	200	1,000

PROJECT DESCRIPTION: Funds are budgeted to rehabilitate TMWA production wells as required. Typically for subgrade rehabilitation efforts, five to six wells are inspected, tested and evaluated every year to determine if rehabilitation is required. Typical subgrade rehab activities include but are not limited to pump and pump column pipe replacements; rehabilitation of well casing and screen; and other enhancements to maintain well function and capacities. Spending in fiscal years 2023-2027 will include improvements at several wells to provide general above grade well equipment and building and/or electrical upgrades. Some of the spending will go towards converting an oil lubed shaft vertical turbine to water lubed and eliminate any standing oil in the well. TMWA has over 90 production wells operating throughout the water system. TMWA relies on these wells to provide drought and emergency supply and as a supplemental source to meet peak demands on the water system.

SCHEDULE: Wells targeted for rehabilitation improvements in FY 2023 include Lakeside Well, STMGID 5 Well, Lightning W Well 3 and Boomtown 12.



Ground Water Supply Improvements Double Diamond #5 and Equipping

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Developer Fees	Double Diamond #5 and Equipping	50	450	—	—	60	560

PROJECT DESCRIPTION: Construct pumping facilities for the existing Double Diamond Well #5 including the pump house building, electrical power, pump/motor and valves and piping to provide an additional 1,200 gallons per minute of peak period supply to the Double Diamond area. The project also includes construction of a blending main between Double Diamond Wells #4 & #5.

SCHEDULE: Based on current growth rates, it is anticipated that the additional capacity from the new well will be needed in the summer of FY 2028.



Ground Water Supply Improvements Callamont Well South Equipping

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Developer Fees	Callamont Well South Equipping	—	60	1,140	—	—	1,200

PROJECT DESCRIPTION: Construct pumping facilities for one of the existing Callamont wells in the Mt. Rose system including the pump house building, electrical power, pump/motor and valves and piping to provide an additional 500 gallons per minute of peak period supply to the area.

SCHEDULE: This project is currently scheduled for construction in FY 2025, but may be constructed sooner (or later) depending on the actual schedule for the proposed 210 unit Callamont residential development.



Ground Water Supply Improvements Air Guard Well Replacement Equipping

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Air Guard Well Replacement Equipping	—	—	—	—	1,100	1,100

PROJECT DESCRIPTION: Replacement of the Air Guard Well in Stead was necessary to reduce sanding and provide additional capacity to the Stead system. The new/replacement well was drilled and constructed in FY 2016. Test pumping indicates the new well will have a capacity of about 2,500 gallons per minute which is twice the capacity of the old well. The budget for FY 2027 is for constructing the pumping facilities including the well building, pump and motor, valves and piping, electrical and controls, etc.

SCHEDULE: The pumping facilities are scheduled for construction in FY 2027.



Ground Water Supply Improvements Lemmon Valley Well #8 Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Lemmon Valley Well #8 Replacement	—	250	1,000	—	—	1,250

PROJECT DESCRIPTION: The existing Lemmon Valley 8 Well has been in service since 1974, making it one of the older wells in the East Lemmon Valley system. The existing well casing and screens show signs of significant corrosion. With the potential for a well casing failure, TMWA intends to drill and equip a replacement well on the existing well property. In addition, the replacement well is expected to have similar construction while producing at least 20 percent more capacity than the original Lemmon Valley 8 Well. The additional capacity will provide supply to support base load supplied from the Fish Springs groundwater system.

SCHEDULE: Well drilling will occur in FY 2024 and well equipping in FY 2025.



Ground Water Supply Improvements Well Fix & Finish

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Well Fix & Finish	350	350	350	350	350	1,750

PROJECT DESCRIPTION: Equipment improvements are expected to bring existing wells up to modern standards, including antiquated equipment replacements and improvements for water quality purposes. This project includes improvements to sodium hypochlorite rooms, pump to waste lines and drainage improvements. It also includes well retrofit for recharge where needed.

SCHEDULE: Projects are identified and prioritized on an annual basis.



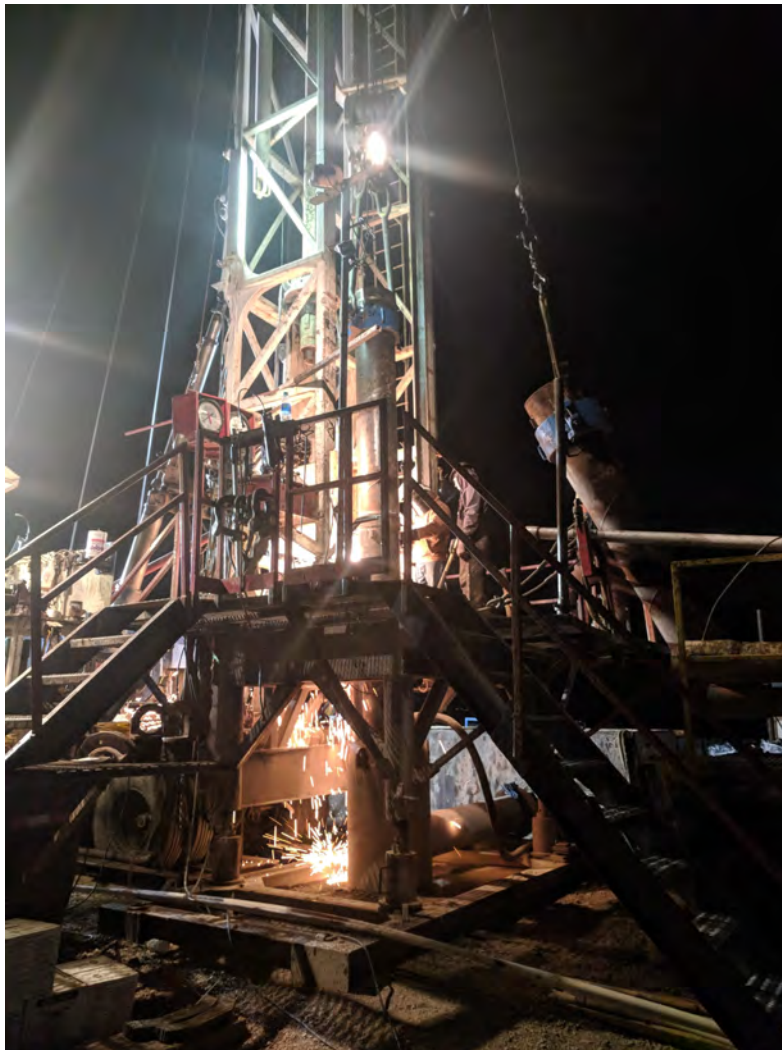
Ground Water Supply Improvements Brush Well & Spring Creek 8 Equipping

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Brush Well Replacement and Spring Creek 8	1,000	—	—	1,500	—	2,500

PROJECT DESCRIPTION: The Brush and Spring Creek 8 production wells were both replaced in FY 2019. Each well will require new infrastructure prior to use. Allocated funds will be utilized for engineering and construction activities required to bring the wells online.

SCHEDULE: This project requires new well infrastructure in FY 2023 and well equipping in FY 2026.



Ground Water Supply Improvements Well Head TTHM Mitigation

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates / Sustainability Fees	Well Head TTHM Mitigation	100	500	500	500	500	2,100

PROJECT DESCRIPTION: Planning, permitting and implementation of tank mixers and ventilation equipment technologies to reduce disinfection by product (DBP) formation in recharged water and receiving groundwater.

SCHEDULE: Planning and design began in FY 2018 and is ongoing. Construction of tank mixers and ventilation equipment at Zolezzi and Verdi Business Park tanks were completed in FY 2019 . Other technologies will be implemented at key recharge well sites in subsequent years based on priority.



Ground Water Supply Improvements Callamont Well North Equipping

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Developer Fees	Callamont Well North Equipping	—	—	—	60	1,140	1,200

PROJECT DESCRIPTION: Construct pumping facilities for the remaining existing Callamont well in the Mt. Rose system including the pump house building, electrical power, pump/motor and valves and piping to provide an additional 500 gallons per minute of peak period supply to the area.

SCHEDULE: This project is currently scheduled for construction in FY 2027, but may be constructed sooner (or later) depending on the actual schedule for the proposed 210 unit Callamont residential development.



Ground Water Supply Improvements Spring Creek Well #10 - Donovan

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Developer Fees	Spring Creek Well #10 - Donovan	150	1,060	—	—	—	1,210

PROJECT DESCRIPTION: The project involves construction and equipping of a new production well located just south of Indian Sage Court in Spanish Springs Valley. TMWA owns a 6,000 square foot parcel at this location where a test well was previously constructed but will need access and pipeline/utility easements. It is anticipated that the new well will produce up to 500 gallons per minute of new supply for the area.

SCHEDULE: This project schedule assumes the new well is drilled and constructed in FY 2023 and the pumping facilities are constructed in FY 2024.



Ground Water Supply Improvements Fish Springs Ranch TDS Monitoring Wells

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Fish Springs Ranch TDS Monitoring Wells	—	250	—	—	—	250

PROJECT DESCRIPTION: This project involves installing a network of wells that will monitor TDS concentrations and vertical gradients near the Fish Springs Ranch production wellfield in Honey Lake Valley. These monitoring locations will provide critical water quality information associated with increased groundwater production at Fish Springs Ranch. Allocated funds will be utilized to drill and construct three nested monitoring wells completed to approximately 450-feet below land surface.

SCHEDULE: Design and construction for the project is scheduled to be completed in FY 2024.



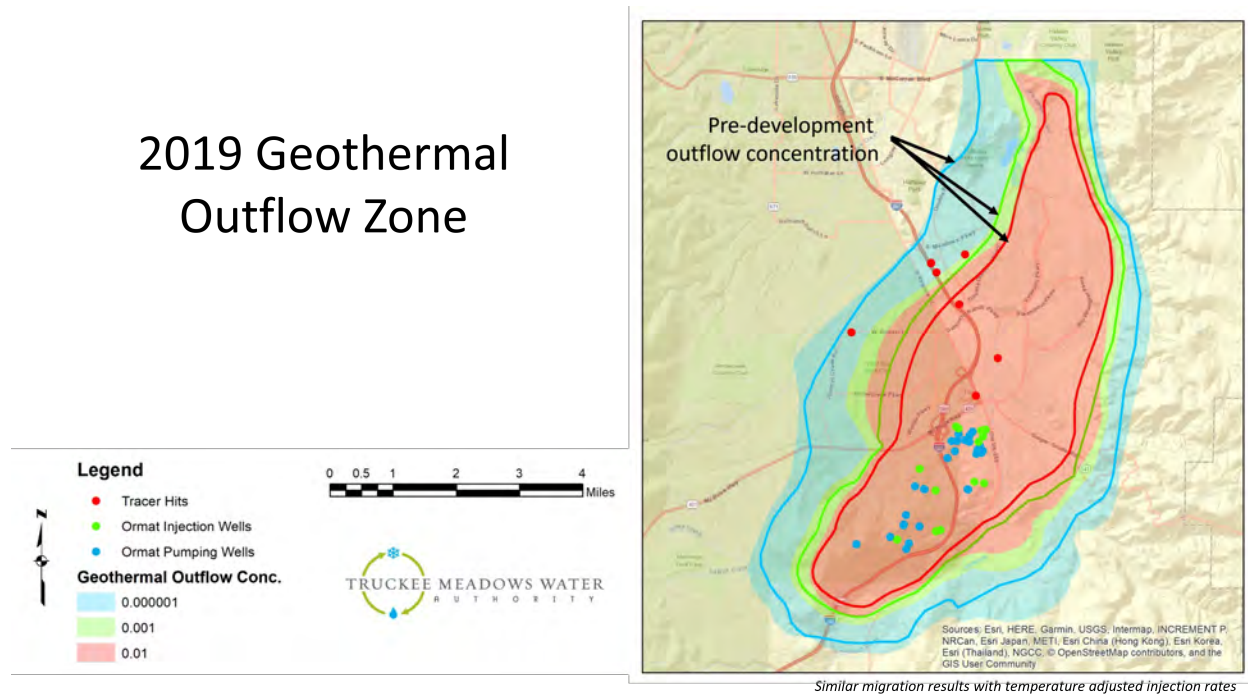
Ground Water Supply Improvements Geothermal Fluid Monitoring Well

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Geothermal Fluid Monitoring Well	100	—	—	—	—	100

PROJECT DESCRIPTION: This project involves drilling and constructing a new well that will monitor fluid flux on the boundary of the Steamboat Hills geothermal outflow zone in South Truckee Meadows. The well will be installed to monitor water quality changes that may eventually impact down gradient municipal supply wells. Allocated funds will be utilized to drill, construct and test a four- to six-inch monitoring well completed to approximately 600-feet below land surface.

SCHEDULE: New monitoring well drilling and construction will occur in FY 2023.



Ground Water Supply Improvements Spring Creek 9 (Spring Creek 4 Replacement)

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Spring Creek Well 9 (Spring Creek 4 Replacement)	760	1,000	—	—	—	1,760

PROJECT DESCRIPTION: The project involves construction and equipping of a new production well in Spanish Springs Valley, located north of the intersection of La Posada Dr. and La Posada Ct (pending land approvals). The well will be a dual purpose ASR/Production Well and it is anticipated that the new well will produce up to 1,500 gpm or 500 gallons per minute of new supply for the area.

SCHEDULE: Drilling and installation will be in FY2023 and equipping in FY2024.



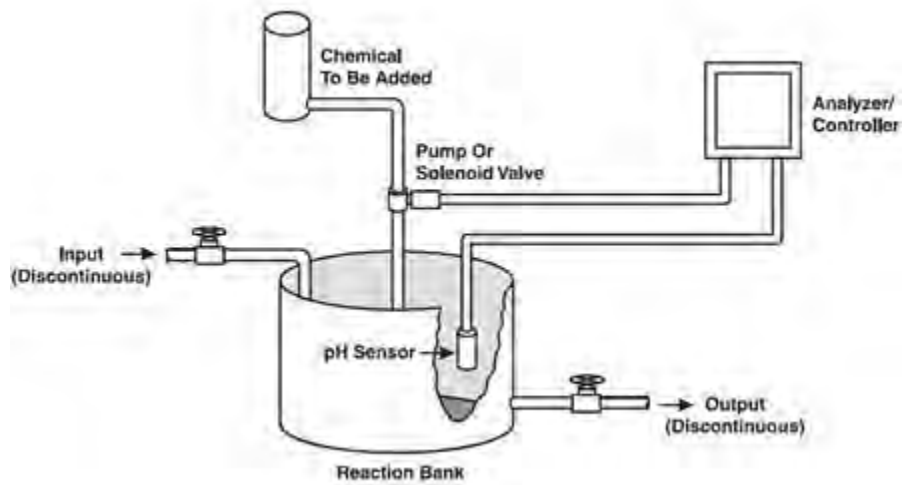
Ground Water Supply Improvements Spring Creek Wells pH Adjustment

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Spring Creek Wells pH Adjustment	750	250	—	—	—	1,000

PROJECT DESCRIPTION: This project involves design, permit, and construct pH control systems at Spring Creek 6 & Spring Creek 7 wells.

SCHEDULE: The project is scheduled to begin in FY 2023.



Ground Water Supply Improvements STMGID Well #1 Re-Drill and Equipping

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	STMGID Well #1 Re-Drill and Equipping	200	—	—	—	1,000	1,200

PROJECT DESCRIPTION: This project involves the complete replacement of STMGID 1. Recent rehabilitation work on the production well indicated the screens have deteriorated enough to allow sediment and gravel pack to pass through. The well is a critical groundwater supply asset as it currently accounts for ~24% of the max day demand in STMGID Tank Zone 1.

SCHEDULE: The well is estimated to be drilled in FY 2023 and constructed in FY2027.



TREATMENT PLANT IMPROVEMENTS

Summary

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Chalk Bluff Treatment Plant Improvements	550	365	360	350	525	2,150
1	Customer Rates	Glendale Treatment Plant Improvements	200	1,000	375	325	405	2,305
1	Customer Rates	Mt Rose Treatment Plant Efficiency Improvements	500	—	—	—	—	500
1	Customer Rates	Chalk Bluff Filter Underdrains	800	800	800	—	—	2,400
1	Customer Rates	Glendale Filter Underdrains	—	500	500	500	500	2,000
3	Customer Rates	Chalk Bluff Lighting Upgrade	—	350	—	—	—	350
3	Customer Rates	Glendale Lighting Upgrade	250	—	—	—	—	250
2	Customer Rates / Insurance Settlement	Orr Ditch Pump Station Rehab and Hydro Facility	15,000	4,000	—	—	—	19,000
1	Customer Rates	Truckee Canyon Water Treatment Improvements	100	100	20	10	10	240
1	Customer Rates	Lightning W Treatment Improvements	20	20	150	10	10	210
1	Customer Rates	SCADA Rehab / Plant Operating Software	1,000	1,000	1,000	1,000	750	4,750
2	Customer Rates	Longley Plant HV 3 and HV 4 Treatment Improvements	695	3,100	—	—	—	3,795
2	Customer Rates	Longley Water Treatment Plant Retrofit	250	—	—	—	—	250
2	Customer Rates	Spanish Springs Nitrate Treatment Facility	250	250	500	—	7,500	8,500
1	Customer Rates	Chalk Bluff Electrical System Upgrades	150	—	—	—	—	150
Subtotal Treatment Improvements			19,765	11,485	3,705	2,195	9,700	46,850

Project Locations: Map of all *Treatment Plant Improvements* projects are highlighted in the following map.

Truckee Meadows Water Authority FY 2023 - 2027 Capital Improvement Plan



Treatment Plant Improvements

Chalk Bluff Treatment Plant Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Chalk Bluff Treatment Plant Improvements	550	365	360	350	525	2,150

PROJECT DESCRIPTION: The Chalk Bluff Water Treatment Plant is 24 years old and requires rehabilitation work to remain operational 24/7/365. This spending is classified as necessary due to the criticality of maintaining plant operations during rehabilitation work. Plant improvements include, but are not limited to, plate settlers inspections, valve and instrument replacement, filter media replacement, UPS upgrades, Trac Vac/sludge removal improvements, treatment train isolation valves, flow meter improvements and safety improvements.

SCHEDULE: Major projects and timelines include: ice fighting improvements to maintain raw water supply via the Highland Canal will continue in FY 2023, instrumentation upgrades will continue within the next five years as obsolete instruments are no longer supported by suppliers. Work to isolate sections of the treatment plant influent trains began in FY 2019. Filter media replacement will occur when yearly filter media evaluation indicates that replacement will soon be necessary.



Treatment Plant Improvements

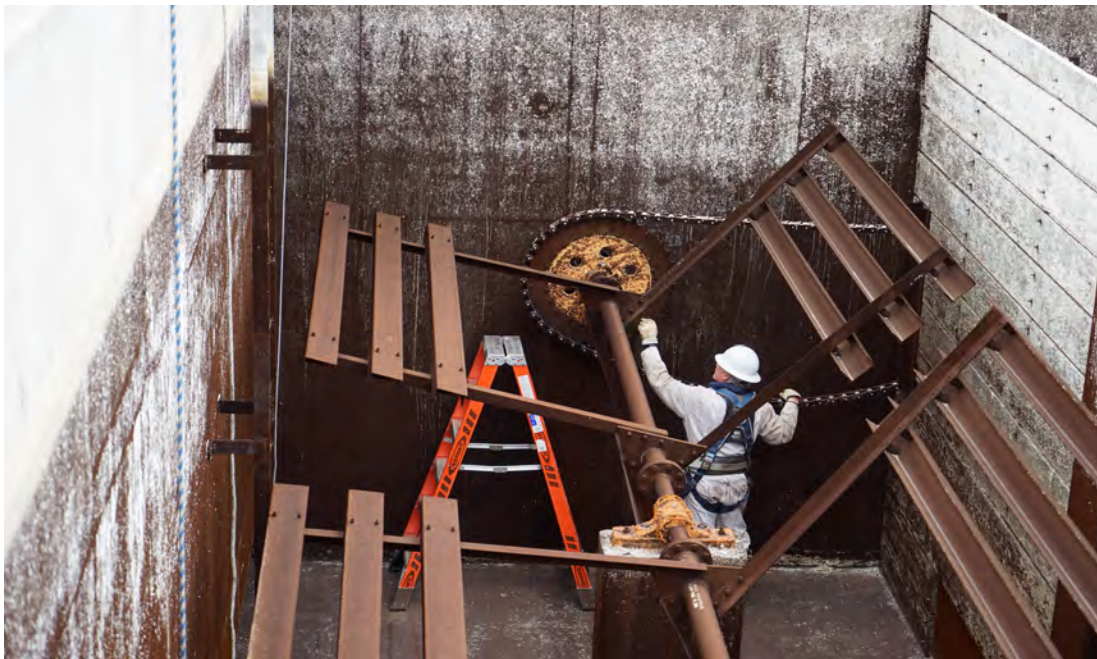
Glendale Treatment Plant Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Glendale Treatment Plant Improvements	200	1,000	375	325	405	2,305

PROJECT DESCRIPTION: The Glendale Water Treatment Plant is 40 years old and remains a significant piece of the water supply portfolio by operating 24/7 typically during the months of April through October. Glendale plays an important role due to its availability to treat off-river water supplies, such as groundwater wells that cannot pump straight to the distribution system. This spending is classified as necessary due to the criticality of maintaining plant operations. Plant improvements include, but are not limited to, plate settler inspections, valve and instrument replacement, Trac Vac improvements, flow meter improvements, treatment chemical upgrades and maintenance storage/shop upgrades.

SCHEDULE: The treatment plant maintenance shop and storage improvements are currently scheduled in FY 2024. Instrumentation upgrades will continue within the next five years as obsolete instruments are no longer supported by suppliers. Filter media replacement will occur when yearly filter media evaluation indicates that replacement will soon be necessary. Since the Glendale plant is used seasonally, most work will continue over the course of the five-year CIP and during the periods that the plant is not operating.



Treatment Plant Improvements

Mt Rose Treatment Plant Efficiency Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Mt Rose Treatment Plant Efficiency Improvements	500	—	—	—	—	500

PROJECT DESCRIPTION: This project contains several efficiency and remote operations improvements identifying during startup and testing of the Mt. Rose Water Treatment Plant (MRWTP). One larger task is adding a permanent air compressor to the creek diversion backwash cycle to support remote operations, use less power and disturb less wildlife by using air for scour instead of pumping water through the screens for backwash. The other improvements include various flow measurement and process control improvements to make remote operations more feasible by reducing on site operations labor hours and reducing downtime.

SCHEDULE: Procurement and install of the equipment and controls is planned to take place in summer/fall of 2022 pending supply chain procurement timing.



Treatment Plant Improvements

Chalk Bluff Filter Underdrains

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Chalk Bluff Filter Underdrains	800	800	800	—	—	2,400

PROJECT DESCRIPTION: The dual media filters at Chalk Bluff are nearing 28 years old and maintenance and/or repairs are needed on filters that have experienced recent underdrain performance issues. An engineering evaluation of the filters has been completed and an entire replacement of one or more filter underdrains is recommended.

SCHEDULE: Due to cost and operational complexities associated with taking a filter out of service, this will be a multi-year effort beginning with design and bidding in FY 2022 and construction taking place in at least FY's 2023-2025.



Treatment Plant Improvements

Glendale Filter Underdrains

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Glendale Filter Underdrains	—	500	500	500	500	2,000

PROJECT DESCRIPTION: The dual media filters at Glendale are nearing 25 years old and maintenance and/or repairs are needed on filters that have experienced recent underdrain performance issues. An engineering evaluation of the filters has been completed and an entire replacement of one or more filter underdrains is recommended.

SCHEDULE: Due to cost and operational complexities associated with taking a filter out of service, this will be a multi-year effort beginning with design and bidding in FY 2024 and construction taking place in FY's 2024-2027.



Treatment Plant Improvements

Chalk Bluff Lighting Upgrade

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
3	Customer Rates	Chalk Bluff Lighting Upgrade	—	350	—	—	—	350

PROJECT DESCRIPTION: Upgrade lighting at the Chalk Bluff Water Treatment Plant. Work will include all areas and buildings outside of the most recent remodel areas as well as upgrades to outside area lighting.

SCHEDULE: Lighting upgrade is scheduled to begin in FY 2024.



Treatment Plant Improvements

Glendale Lighting Upgrade

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
3	Customer Rates	Glendale Lighting Upgrade	250	—	—	—	—	250

PROJECT DESCRIPTION: Upgrade lighting at the Glendale Water Treatment Plant. Work will include all areas and buildings outside of the most recent remodel areas as well as upgrades to outside area lighting.

SCHEDULE: Lighting upgrade is scheduled to begin in FY 2023.



Treatment Plant Improvements

Orr Ditch Pump Station Rehabilitation and Hydro Facility

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates / Insurance Settlement	Orr Ditch Pump Station Rehab and Hydro Facility	15,000	4,000	—	—	—	19,000

PROJECT DESCRIPTION: This project will increase redundancy and reliability by enhancing the Truckee River source of supply to the Chalk Bluff Water Treatment Plant. Currently, there are very limited options to facilitate repairs or conduct preventative maintenance due to the location and arrangement of the intake structure and wet well. The project design will include modifying the existing proprietary wet well submersible pump design into a pedestal-style vertical turbine pump arrangement with non-submerged motors, the construction of a building over the top of the wet well to increase security and allow a safer means of performing maintenance activities, and incorporate a system to eliminate silting issues within the intake structure. During periods of low demand, the Highland Canal has available capacity to bring water to the Chalk Bluff Facility. An existing pipeline brings water from the river via the Orr Ditch Pump Station up to Chalk Bluff. A feasibility and financial study will be completed to analyze the possibility of using existing infrastructure with the addition of power generation equipment to produce power for direct use at the Chalk Bluff Water Treatment Facility.

SCHEDULE: Construction will commence in FY's 2023-2024 and scheduled to be completed in FY 2024.



Treatment Plant Improvements

Truckee Canyon Water Treatment Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Truckee Canyon Water Treatment Improvements	100	100	20	10	10	240

PROJECT DESCRIPTION: The current treatment system which removes arsenic, iron, and manganese consists of a greensand filter system and an evaporation pond for backwash water with a total capacity of about 100 gallons per minute. Scheduled improvements may include the addition of a polymer feed system to improve filter performance, fine tuning of the treatment process to reflect chemical changes in the raw water and replacement of miscellaneous components and control upgrades.

SCHEDULE: Expenditures in FY's 2023-2027 are contingent spending related to treatment efficiency and for chemical changes in the raw water.



Treatment Plant Improvements

Lightning W Treatment Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Lightning W Treatment Improvements	20	20	150	10	10	210

PROJECT DESCRIPTION: The existing treatment process consists of two ion exchange resin pressure vessels to remove uranium. Previous work included change out/replacement of the filter media, disposal of the spent media. The remaining work includes miscellaneous improvements to the building that houses the treatment equipment.

SCHEDULE: The FY 2023 work includes miscellaneous building improvements.



Treatment Plant Improvements

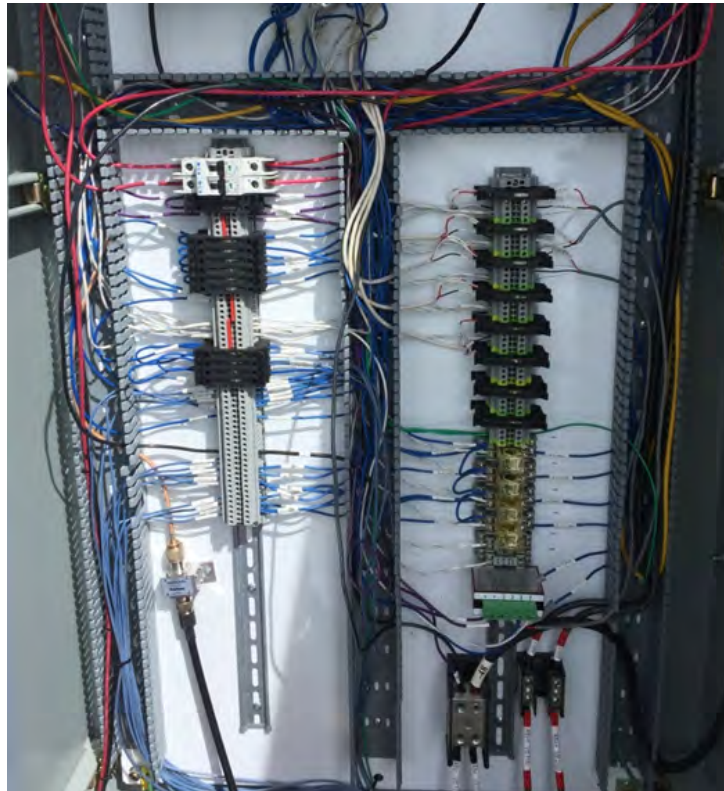
SCADA Rehab/Plant Operating Software

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	SCADA Rehab / Plant Operating Software	1,000	1,000	1,000	1,000	750	4,750

PROJECT DESCRIPTION: SCADA (Supervisory Control and Data Acquisition) is the system by which TMWA monitors, records and controls the water system inputs, outputs, flows and pressures. Data acquired by these system controls are primarily monitored at the treatment plants, but the system equipment and technology are spread throughout the water system infrastructure. Much of the technology is approaching obsolescence and needs to be replaced with emphasis on standardization of programmable logic controllers (PLC) and other equipment. Therefore, TMWA decided on a systematic approach to updating the equipment and operating software starting in fiscal year 2015 with telemetry improvement in the ensuing four years to convert to wireless transmission of data feeds where possible.

SCHEDULE: The improvements and replacements of the equipment and operating software will continue through FY 2027.



Treatment Plant Improvements

Longley Lane HV 3 and HV 4 Treatment Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Longley Plant HV 3 and HV 4 Treatment Improvements	695	3,100	—	—	—	3,795

PROJECT DESCRIPTION: TMWA completed planning and preliminary design of an innovative UV disinfection / Arsenic blending water treatment process to treat the HV 3 and HV 4 groundwater wells that are out of service due to surface water influence and elevated arsenic. These wells were formerly treated at the Longley Lane WTP which is currently not being utilized as a treatment facility due to needed safety improvements on the chemical feed, membrane clean-in-place and the solids handling piping systems. An assessment of the plant was completed, and short-term improvements identified to modify the facility to serve as a booster pump station using either surface water or groundwater supply sources.

SCHEDULE: Planning and permitting to be completed in FY 2022. Design and construction to be performed in FY's 2023-2024.



Treatment Plant Improvements

Longley Water Treatment Plant Retrofit

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Longley Water Treatment Plant Retrofit	250	—	—	—	—	250

PROJECT DESCRIPTION: Conduct a planning study to determine what improvements and costs would be needed to convert the existing Longley Lane WTP from a micro filtration process to a greensand arsenic/iron/manganese treatment process.

SCHEDULE: Planning and permitting to be completed in FY 2022. Design and construction to be performed in FY 2023.



Treatment Plant Improvements

Spanish Springs Nitrate Treatment Facility

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Spanish Springs Nitrate Treatment Facility	250	250	500	—	7,500	8,500

PROJECT DESCRIPTION: Initiation of planning, permitting, site acquisition and design for a 3 MGD biological water treatment process to treat several groundwater wells in Spanish Springs that are out of service due to elevated nitrate and arsenic. Treatment is required to maintain and restore the service capacity of the wells.

TMWA completed the operation and testing of a 5 GPM pilot treatment plant in 2018. Biological treatment of nitrate in potable water is currently not permitted in Nevada. TMWA, working with Carollo Engineers, UNR and WaterStart, has evaluated this innovative technology and determined it to be a cost-effective treatment solution compared to traditional, high cost alternatives such as ion exchange.

SCHEDULE: Planning, permitting, site acquisition and design to be conducted in FY's 2023-2025 with construction scheduled to begin in FY2027.



Treatment Plant Improvements Chalk Bluff Electrical System Upgrades

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Chalk Bluff Electrical System Upgrades	150	—	—	—	—	150

PROJECT DESCRIPTION: Evaluation of the existing electrical system at the Chalk Bluff Treatment Plant to identify the cause of main breaker power disruption when electrical faults occur in auxiliary plant equipment.

SCHEDULE: Electrical System upgrades are scheduled to be completed in FY 2023.



DISTRIBUTION SYSTEM PRESSURE IMPROVEMENTS

Summary

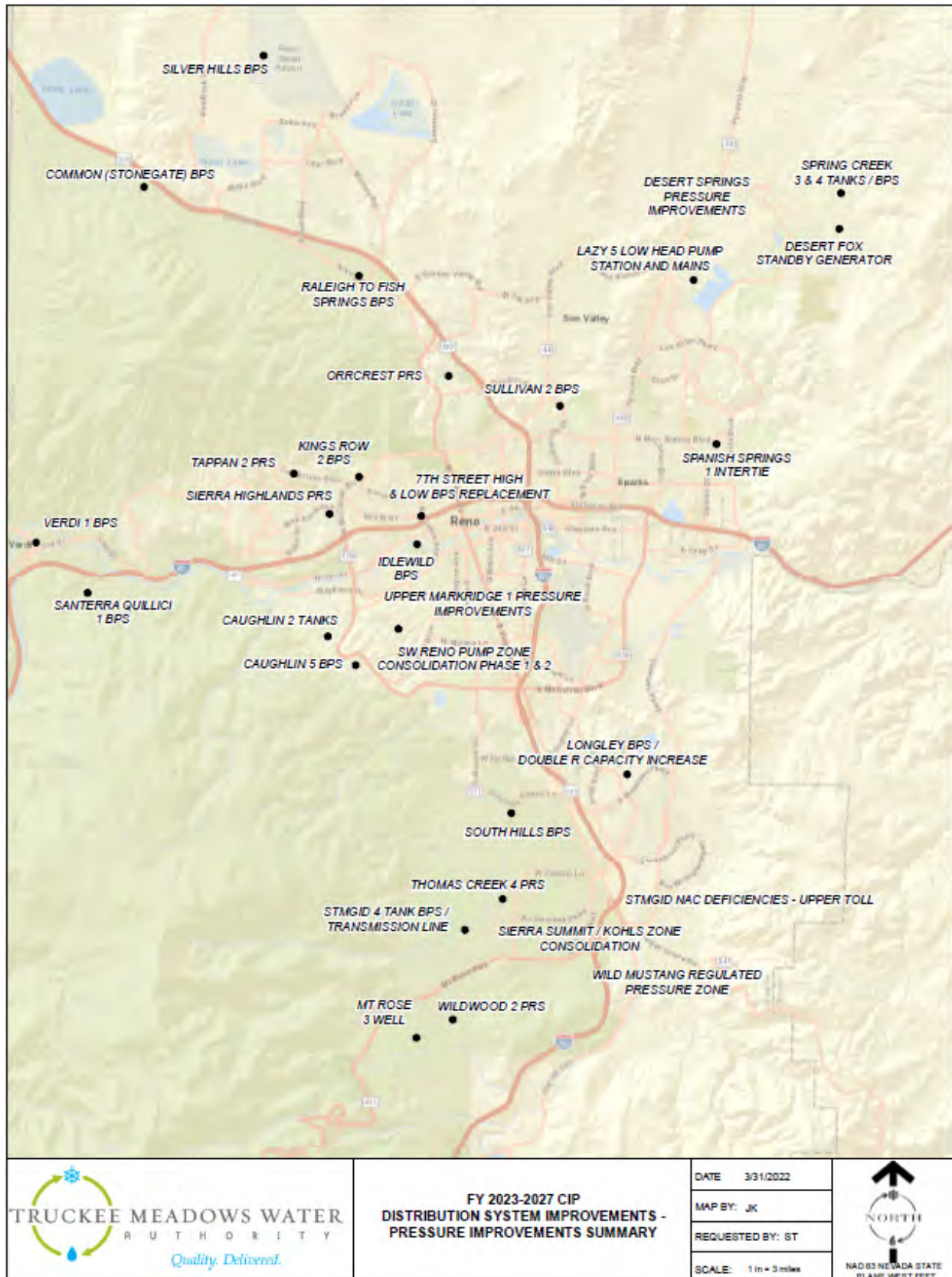
Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Pressure Regulators Rehabilitation	1,000	500	500	500	500	3,000
2	Customer Rates	Land Acquisitions	150	150	150	150	150	750
2	Customer Rates	Desert Fox Standby Generator	—	150	—	—	—	150
1	Developer Fees	Longley Booster Pump Station / Double R Capacity Increase	—	250	1,000	—	—	1,250
3	Customer Rates	Pump Station Oversizing	100	100	100	100	100	500
1	Customer Rates	Pump Station Rebuilds, Rehabilitations	150	150	150	150	150	750
2	Customer Rates / Developer Fees	Sullivan #2 Booster Pump Station Replacement	—	—	—	—	80	80
2	Customer Rates	Mount Rose Well #3 Pump Station Improvements	—	250	—	—	—	250
3	Customer Rates	Standby Generator Improvements	50	50	50	50	50	250
1	Customer Rates	PSOM Standby Generator Additions	100	—	2,100	2,100	—	4,300
1	Customer Rates	Idlewild Booster Pump Station Improvements	100	1,200	—	—	—	1,300
2	Developer Fees	Raleigh to Fish Springs Booster Pump Station	—	—	—	—	300	300
2	Customer Rates / Developer Fees	South-West Pump Zone Consolidation Phase 1	—	—	—	—	330	330
2	Customer Rates	Spanish Springs #1 Pump Zone Intertie	600	—	—	—	—	600
2	Developer Fees	STMGID Tank #4 Booster Pump Station / Transmission Line	100	300	1,000	—	250	1,650
2	Developer Fees	Wildwood 2 Pressure Regulating Station SCADA Control	—	100	—	—	—	100
2	Customer Rates / Developer Fees	South-West Pump Zone Consolidation Phase 2	—	—	—	—	50	50
2	Customer Rates	Sierra Summit-Kohl's Zone Consolidation	—	—	380	400	—	780
2	Customer Rates	Wild Mustang Regulated Pressure Zone	—	—	50	380	—	430

Truckee Meadows Water Authority FY 2023 - 2027 Capital Improvement Plan

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Thomas Creek #4 PRS	—	170	—	—	—	170
2	Customer Rates	Kings Row 2 Booster Pump Station	—	—	—	150	150	300
2	Developer Fees	Spring Creek Tanks #3&4 Booster Pump Station Modifications	—	—	—	200	900	1,100
1	Developer Fees	Lazy 5 Low Head Pump Station & Mains	1,000	1,000	—	—	—	2,000
1	Reimbursements	Common (Stonegate) Booster Pump Station	1,100	1,100	—	—	—	2,200
2	Customer Rates	Caughlin 5C Pump and Motor Replacement	150	—	—	—	—	150
1	Customer Rates	South Hills BPS Replacement	—	—	70	2,750	1,500	4,320
2	Customer Rates	Sierra Highlands PRS	—	—	210	—	—	210
1	Customer Rates	Caughlin 2 Tanks	—	—	500	1,000	1,500	3,000
1	Customer Rates	7th Street High & Low BPS Replacement	1,300	2,000	—	—	—	3,300
1	Customer Rates	STMGID NAC Deficiencies - Upper Toll	500	600	2,500	—	—	3,600
1	Reimbursements	Verdi 1 BPS	1,750	750	—	—	—	2,500
1	Reimbursements	Santerra Quilici 1 BPS	1,150	450	—	—	—	1,600
1	Reimbursements	Silver Hills BPS	200	1,000	500	—	—	1,700
2	Customer Rates	Upper Markridge 1 Pressure Improvements	150	—	—	—	—	150
2	Customer Rates	Orrcrest PRS	150	—	—	—	—	150
2	Customer Rates	Tappan 2 PRS	—	250	—	—	—	250
Sub-Total Pressure Improvements			9,800	10,520	9,260	7,930	6,010	43,520

Project Locations: Map of all *Distribution System Pressure Improvements* projects are highlighted in the following map.

Truckee Meadows Water Authority FY 2023 - 2027 Capital Improvement Plan



Distribution System Pressure Improvements

Pressure Regulators Rehabilitation

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Pressure Regulators Rehabilitation	1,000	500	500	500	500	3,000

PROJECT DESCRIPTION: Provision is made in the annual budget for major rehabilitation or complete reconstruction of several pressure regulators in the distribution system. TMWA has evaluated nearly 130 pressure regulator stations currently in service and has identified a number of pressure regulator stations requiring a certain amount of rehabilitation on an annual basis.

SCHEDULE: This is an ongoing rehabilitation project with about 130 individual stations identified as requiring rehabilitation or replacement over the next fifteen years.



Distribution System Pressure Improvements Land Acquisitions

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Land Acquisitions	150	150	150	150	150	750

PROJECT DESCRIPTION: TMWA has over 120 pump stations in service. Many of these pump stations have 480 volt electrical services and are underground (below grade) in locations that allows for water infiltration. Many underground pump stations will be reaching the end of their service life, which will require replacement of the underground vault. Rather than replace the stations in place TMWA is planning to acquire other sites so these stations can be rebuilt above grade improving access and safety. Acquisition of sites may be time consuming and may not be purchased in a particular year.

SCHEDULE: This is an ongoing project with funding to allow purchase of 3-4 sites per year depending on location and market conditions.



Distribution System Pressure Improvements Desert Fox Standby Generator

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Desert Fox Standby Generator	—	150	—	—	—	150

PROJECT DESCRIPTION: This project involves furnishing and installing a new standby generator and ATS to power one 50 Hp pump at the existing Desert Fox booster pump station. This alternative pumping capacity is needed when the existing 0.5 MG Spring Creek #5A Tank is out of service for recoating or other maintenance or if an extended power outage occurs in the area.

SCHEDULE: The installation of the generator is scheduled in FY 2024.



Distribution System Pressure Improvements

Longley Booster Pump Station/Double R Capacity Increase

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Developer Fees	Longley Booster Pump Station / Double R Capacity Increase	—	250	1,000	—	—	1,250

PROJECT DESCRIPTION: Increase pumping capacity at the existing Longley Lane Booster Pump Station and make improvements at the Double R Intertie to provide additional peak supply to the Double Diamond area. The improvements at the Longley pump station will consist of replacing one of the existing pumps/motors with a new higher capacity unit along with electrical and motor starter upgrades. Certain components of the Double R Intertie will be replaced to provide the additional capacity without excessive friction losses.

SCHEDULE: The improvements are scheduled for FY's 2024-2025. The improvements are necessary when supply through the Double R Intertie must exceed 5,400 gallons per minute.



Distribution System Pressure Improvements Pump Station Oversizing

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
3	Customer Rates	Pump Station Oversizing	100	100	100	100	100	500

PROJECT DESCRIPTION: The project may consist of cash contributions towards construction of a new above ground booster pump stations. From time to time, TMWA may provide oversizing to certain booster stations that are development driven. Each is reviewed on a case by case basis.

SCHEDULE: The improvements are ongoing, but the schedule is subject to change based on development & operational needs.



Distribution System Pressure Improvements Pump Station Rebuilds, Rehabilitations

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Pump Station Rebuilds, Rehabilitations	150	150	150	150	150	750

PROJECT DESCRIPTION: TMWA has over 120 pump stations in service. An amount is budgeted annually for rehabilitation of TMWA's older pump stations. Other pump stations may require pump, motor, and electrical upgrades. Budget for future years will allow TMWA to complete up to one above ground replacement project per year if suitable sites can be acquired. Otherwise, normal rehabilitation work will be performed per the priorities established by the study at a lower overall annual cost.

SCHEDULE: In FY 2023, TMWA is preparing to reconstruct a number of booster stations above ground. Depending on land acquisition timing and priorities of rehabilitation, it could be the Scottsdale BPS, Kings Row #2 Pump Station or the South Hills BPS.



Distribution System Pressure Improvements

Sullivan #2 Booster Pump Station Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates / Developer Fees	Sullivan #2 Booster Pump Station Replacement	—	—	—	—	80	80

PROJECT DESCRIPTION: The project involves construction of a new above grade pump station at the site of the existing Sullivan Tank on El Rancho. The new pump station will pump to the proposed Sun Valley #2 Tank tentatively located off of Dandini Drive near the TMCC/ DRI complex. Completion of these facilities should allow the retirement of the existing Sun Valley #1 pump station.

SCHEDULE: Construction is scheduled to begin in FY 2028 to reflect delays in obtaining a tank site due to unknowns with the US 395 Connector Project.



**Distribution System Pressure Improvements
Mt. Rose Well #3 Pump Station Improvements**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Mount Rose Well #3 Pump Station Improvements	—	250	—	—	—	250

PROJECT DESCRIPTION: The project involves rehab of the building, removal of pipe and valves that will no longer be necessary following completion of the Mt. Rose Well #3 improvements and upgrades to electrical and control systems.

SCHEDULE: Construction is scheduled in FY 2024.



Distribution System Pressure Improvements Standby Generator Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
3	Customer Rates	Standby Generator Improvements	50	50	50	50	50	250

PROJECT DESCRIPTION: A number of TMWA pumps stations have backup generation in case of power failures. TMWA incorporates a contingency for replacement of a generator in case of failure or if the Washoe County Health District requires backup generation at a particular site. No spending will occur unless necessary. This spending does not include backup generation for new pump stations required by and paid for by growth.

SCHEDULE: No single project has been identified for the current 5-year CIP and no funds will be expended unless necessary.



Distribution System Pressure Improvements PSOM Standby Generator Additions

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	PSOM Standby Generator Additions	100	—	2,100	2,100	—	4,300

PROJECT DESCRIPTION: In 2021, NV Energy began their efforts to de-risk their infrastructure during periods of high fire risk (high winds, low humidity). Those efforts culminated in the “Public Safety Outage Management” or “PSOM” events where NV Energy proactively de-energizes their grid for up to 72 hours per event. TMWA has initially responded by renting several large trailer mounted generators and modified various facilities to accept the electrical connections from these generators. This project will procure and install permanent generators for these sites: Caughlin 2 BPS, Caughlin 3 BPS, Caughlin 4 BPS, Mt. Rose 5 BPS and Well, US 40 BPS, Mae Anne 1 BPS, Mt. Rose Tank 1 BPS.

SCHEDULE: TMWA will prioritize the Caughlin pump systems and US 40 BPS in FY 2025 and the balance of the stations in FY 2026. A review of the financial viability of continuing to rent the trailer mounted generators will occur prior to procurement.



Distribution System Pressure Improvements Idlewild Booster Pump Station Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Idlewild Booster Pump Station Improvements	100	1,200	—	—	—	1,300

PROJECT DESCRIPTION: The project will replace existing pumps and motors at the Idlewild BPS Transfer Station to insure adequate and reliable emergency capacity. It is the only booster station that is capable of transferring water from the Highland Reservoir Zone to the Hunter Creek Reservoir Zone. The station was originally constructed as part of the Idlewild WTP, and was never designed specifically for the purpose that it is used for today. Improvements identified in the project include: Properly sizing new pumps and motors for today's application, upgrading antiquated electrical systems and HVAC systems and bringing building up to modern construction codes. Evaluations by TMWA indicated this was the most cost effective alternative to provide a redundant supply for the zone and allowed retirement of the old 24-inch transmission pipeline on Plumb Lane all the way to the Hunter Creek Reservoir.

SCHEDULE: Design is scheduled for FY 2023 and construction should begin in FY 2024. This schedule may be moved based on system needs.



Distribution System Pressure Improvements Raleigh to Fish Springs Booster Pump Station

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Developer Fees	Raleigh to Fish Springs Booster Pump Station	—	—	—	—	300	300

PROJECT DESCRIPTION: The project involves construction of a new pump station to pump water from the Raleigh Heights zone to the Fish Springs terminal tank when the Fish Springs Wells are off-line or if a main break occurs on the Fish Springs transmission line. In the future, there will be a number of customers served directly from the Fish Springs terminal tank; therefore, it is necessary to provide a secondary supply to maintain continuous water service.

SCHEDULE: Implementation will begin in FY 2027 and construction in FY 2028.



Distribution System Pressure Improvements South-West Reno Pump Zone Consolidation Phase 1

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates / Developer Fees	South-West Pump Zone Consolidation Phase 1	—	—	—	—	330	330

PROJECT DESCRIPTION: The project includes a new high head booster pump station located on Lakeridge golf course property adjacent to Plumas; a new 12-inch suction pipeline from Lakeside Dr.; a high pressure transmission pipeline from the pump station across golf course property to Greensboro and McCarran Blvd.; and another 12-inch pipeline tie to the Ridgeview #1 pump zone. The completion of Phase 1 will allow the retirement of four existing below ground pump stations (Lakeside, Lakeridge, Plumas, Ridgeview #1).

SCHEDULE: Design of the improvements is scheduled to begin in FY 2027. Construction is scheduled for FY 2028.



Distribution System Pressure Improvements Spanish Springs #1 Pressure Zone Intertie

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Spanish Springs #1 Pump Zone Intertie	600	—	—	—	—	600

PROJECT DESCRIPTION: The project consists of about 1,600 feet of 8-inch main from Rio Alayne Ct to Martini Rd. paralleling the Orr Ditch and a new pressure regulating station. Completion of the facilities will allow the retirement of the existing underground Spanish Springs #1 pump station.

SCHEDULE: The project is scheduled for FY 2023.



Distribution System Pressure Improvements

STMGID Tank #4 Booster Pump Station / Transmission Line

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Developer Fees	STMGID Tank #4 Booster Pump Station / Transmission Line	100	300	1,000	—	250	1,650

PROJECT DESCRIPTION: The project includes a new booster pump station located near the STMGID Tank 4/5 site and approximately 6,000 feet of 12-inch discharge main to the Mt Rose WTP. The facilities will provide a supplemental source to the Mt Rose WTP that will back up plant production on the maximum day during drought and will also provide another source of supply for implementing conjunctive use in the area.

SCHEDULE: Design of the pipeline and pressure regulating station will begin in FY 2023 and construction will begin in FY 2024. The design and construction of the pump station will begin in FY 2026 with construction following in FY 2027. The need for the pump station may elevate based on an extended drought and source supply to the Mt. Rose WTP.



Distribution System Pressure Improvements

Wildwood Pressure Regulating Station/SCADA Control

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Developer Fees	Wildwood 2 Pressure Regulating Station SCADA Control	—	100	—	—	—	100

PROJECT DESCRIPTION: The project involves retrofitting an existing pressure regulating station to SCADA (remote) control to provide additional transfer capacity into the Mt Rose Tank #2 zone. It will be necessary to obtain electrical service to the existing vault; install a new PLC; and to equip the existing pressure regulating valve with solenoid control to allow the valve to be remotely operated from the Glendale control room.

SCHEDULE: The project is scheduled for FY 2024 but may be delayed or accelerated depending on the timing of growth and the need for the additional tank fill capacity.



**Distribution System Pressure Improvements
South-West Reno Pump Zone Consolidation Phase #2**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates / Developer Fees	South-West Pump Zone Consolidation Phase 2	—	—	—	—	50	50

PROJECT DESCRIPTION: The project is a continuation of Phase 1 and involves construction of additional water main to further integrate the new South-West Reno pump station and allow the retirement of one more existing underground pump station plus provide backup to two other pump zones.

SCHEDULE: Design of the facilities is scheduled to begin in FY 2027. Construction is scheduled to start in FY 2028.



Distribution System Pressure Improvements Sierra Summit-Kohl's Zone Consolidation

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Sierra Summit-Kohl's Zone Consolidation	—	—	380	400	—	780

PROJECT DESCRIPTION: The project involves construction of a new pressure regulating station (PRS) at Old Virginia and Sutherland; a short main tie between the former STMGID Well #9 site and the distribution system; and about 950 feet of 8-inch main in Sutherland from the PRS to Sage Hill Road. The improvements will convert an area with very high distribution system pressures to the existing Kohl's Regulated Zone and would expand the regulated zone by consolidating the Kohl's, Walmart and Old Virginia #2 regulated pressure zones.

SCHEDULE: The project is scheduled for construction in FY 2025.



Distribution System Pressure Improvements Wild Mustang Regulated Pressure Zone

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Wild Mustang Regulated Pressure Zone	—	—	50	380	—	430

PROJECT DESCRIPTION: The project involves construction of a new pressure regulator station and approximately 750 LF of water main to create a new pressure zone in the Geiger Grade area of the South Truckee Meadows to reduce distribution system pressures in the area.

SCHEDULE: Design of the construction is scheduled to begin in FY 2025. Construction is scheduled to start in FY 2026.



**Distribution System Pressure Improvements
Thomas Creek #4 PRS**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Thomas Creek #4 PRS	—	170	—	—	—	170

PROJECT DESCRIPTION: The project involves construction of a new PRS and approximately 160 LF of water main to increase capacity to the Moonrise pressure zone. The increase in capacity will help with replenishing storage in the STMGID Tank and increase fire flow within the zone.

SCHEDULE: The project is scheduled for FY 2024.



Distribution System Pressure Improvements Kings Row 2 Booster Pump Station

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Kings Row 2 Booster Pump Station	—	—	—	150	150	300

PROJECT DESCRIPTION: This project will replace the existing underground Kings Row #1 pump station with a new above ground pump station on TMWA property. The project is part of annual booster pump station rehabilitation/replacement program focused on reconstructing existing pump stations above grade.

SCHEDULE: Planning and design will occur in FY's 2026-2027 with construction scheduled in FY 2028.



Distribution System Pressure Improvements Spring Creek Tanks #3&4 Booster Pump Station Modifications

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Developer Fees	Spring Creek Tanks #3&4 Booster Pump Station Modifications	—	—	—	200	900	1,100

PROJECT DESCRIPTION: This project will replace an existing 200 GPM pump with a new pump/motor rated for 1800 GPM at the existing Spring Creek 3/4 Tanks site in Spanish Springs Valley. The existing regulated bypass will also be equipped for SCADA control. The improvements will provide redundant supply to the Desert Springs 3 and Spring Creek 6 tank zones.

SCHEDULE: Planning and design will occur in FY 2026 with construction scheduled in FY 2027.



Distribution System Pressure Improvements Lazy 5 Low Head Pump Station & Mains

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Developer Fees	Lazy 5 Low Head Pump Station & Mains	1,000	1,000	—	—	—	2,000

PROJECT DESCRIPTION: The project involves construction of a new low head pump station located near the existing Lazy 5 Intertie in NE Sparks/Spanish Springs Valley along with suction and discharge mains. TMWA will need to acquire a parcel of land and pipeline easements out to the Pyramid Hwy. The project will increase TMWA’s ability to transfer surface water to the Spanish Springs Valley and may defer more costly groundwater treatment options to increase capacity for growth.

SCHEDULE: Planning and design will occur in FY 2023 with construction scheduled to end in FY 2024.



Distribution System Pressure Improvements Common (Stonegate) Booster Pump Station

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Reimbursements	Common (Stonegate) Booster Pump Station	1,100	1,100	—	—	—	2,200

PROJECT DESCRIPTION: The project consists of design and construction of a new booster pump station to deliver the water supply for the proposed Stonegate development in Cold Springs. Suction and discharge pipelines on North Virginia and terminal storage facilities in Cold Springs will be constructed by Stonegate as applicant-installed projects. The pump station will be located on a parcel on North Virginia that has already been acquired by Stonegate. Stonegate is responsible for 100 percent of the project costs.

SCHEDULE: Design was initiated in FY 2020 with construction scheduled in FY 2023.



Distribution System Pressure Improvements Caughlin 5C Pump and Motor Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Caughlin 5C Pump and Motor Replacement	150	—	—	—	—	150

PROJECT DESCRIPTION: The project involves replacement of the existing Caughlin #5 pump station “C” Pump with a higher capacity unit and construction of a main tie near Foxcreek Trail and Village Green Parkway to avoid a 300+ customer outage when Caughlin #5 Pump Station is off-line.

SCHEDULE: The project will be designed and built in FY 2023.



Distribution System Pressure Improvements South Hills BPS Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	South Hills BPS Replacement	—	—	70	2,750	1,500	4,320

PROJECT DESCRIPTION: The project involves construction of a new, above grade BPS with genset; 3,700 feet of 16-inch main, 250 feet of 14-inch main and 2,300 feet of 12-inch main on Broken Hills Rd, Foothill Rd and Broili; a new Caribou PRS; and 9 each individual PRV'S on customer service lines.

SCHEDULE: Planning and design is scheduled to begin in FY 2025 and construction is scheduled to begin in FY 2026 with the project completing in FY 2027.



**Distribution System Pressure Improvements
Sierra Highlands Pressure Regulator System**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Sierra Highlands PRS	—	—	210	—	—	210

PROJECT DESCRIPTION: The project involves construction of a new PRS located near the intersection of Sierra Highlands Drive and North McCarran Blvd. to provide a secondary/ supplemental supply from the Mae Anne-McCarran zone to the Chalk Bluff zone.

SCHEDULE: Construction for the project is scheduled for FY 2025.



Distribution System Pressure Improvements Caughlin 2 Tanks

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Caughlin 2 Tanks	—	—	500	1,000	1,500	3,000

PROJECT DESCRIPTION: The project involves the proposed Caughlin 2 tanks that will provide redundancy for an existing continuous pumping zone and will expand emergency storage for the entire southwest area. The tanks will also provide a greater level of redundancy to a fire prone area by relying less on pumping and power, and more on elevated storage.

SCHEDULE: Construction for the project is scheduled to begin in FY 2025.



Distribution System Pressure Improvements
7th Street High & Low Booster Pump Station Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	7th Street High & Low BPS Replacement	1,300	2,000	—	—	—	3,300

PROJECT DESCRIPTION: The project will replace 2 underground pump stations in the intersection of Keystone Avenue and 7th Street in Northwest Reno. The pump stations need rehabilitation and accessing them for maintenance is unsafe and requires major traffic control in the highly traveled intersection. TMWA has been in discussions with NDOT for purchasing a remnant parcel on 7th street east of Keystone Avenue and West of Vine Street.

SCHEDULE: Construction for the project is scheduled for FY's 2023-2024.



Distribution System Pressure Improvements STMGID NAC Deficiencies - Upper Toll

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	STMGID NAC Deficiencies - Upper Toll	500	600	2,500	—	—	3,600

PROJECT DESCRIPTION: The project consists of main ties, hydrant installations and individual booster pump systems to be constructed in multiple locations in former STMGID service areas to correct NAC pressure and fire flow deficiencies. In order to correct deficiencies in the upper Toll Road area, it will be necessary to create a new higher pressure zone by constructing a new tank, booster pump station and approximately 6,300 linear feet of 12-inch main.

SCHEDULE: The new pressure zone on upper Toll Road will be constructed in FY 2025 subject to acquisition of the tank site property which may be private or on BLM property.



Distribution System Pressure Improvements Verdi 1 Booster Pump Station

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Reimbursements	Verdi 1 BPS	1,750	750	—	—	—	2,500

PROJECT DESCRIPTION: This pump station is part of the ‘backbone facilities’ necessary to bring more surface water to the Verdi area and meet planned/approved growth via various housing projects underway. The planned capacity is 3,500 gpm.

SCHEDULE: Design will begin in FY 2023 and construction will occur in FY's 2023-2024.



Distribution System Pressure Improvements Santerra Quillici 1 Booster Pump Station

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Reimbursements	Santerra Quillici 1 BPS	1,150	450	—	—	—	1,600

PROJECT DESCRIPTION: This pump station will be located next to the Boomtown Tanks to provide service to the portions of Santerra Quillici project located higher in elevation than can be served by existing infrastructure. The planned capacity is 1,000 gpm.

SCHEDULE: Design will begin in FY 2023 and construction will occur in FY's 2023-2024



Distribution System Pressure Improvements Silver Hills Booster Pump Station

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Reimbursements	Silver Hills BPS	200	1,000	500	—	—	1,700

PROJECT DESCRIPTION: The pump station will be located next to the Army Air well at the Reno Stead Airport to provide service to the Silver Hills project located to the west of the Airport and on either side of Red Rock Road. The planned capacity is 2,000 gpm.

SCHEDULE: Design will begin in FY 2023 and construction will occur in FY's 2023-2024.



Distribution System Pressure Improvements

Upper Markridge 1 Pressure Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Upper Markridge 1 Pressure Improvements	150	—	—	—	—	150

PROJECT DESCRIPTION: This project will make pressure zone improvements to the Markridge 1 Pressure zone as well as convert up to 11 customers to the Markridge 2 pressure zone and increase their service pressures. A main extension will be required on Belford Rd. between Sunnyvale Ave and Marthiam Ave. Private plumbing modifications may be required.

SCHEDULE: Design and construction planned in FY 2023.



Distribution System Pressure Improvements Orrcrest Pressure Regulator System

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Orrcrest PRS	150	—	—	—	—	150

PROJECT DESCRIPTION: This project consists of adding a secondary supply to the Tenaya Regulated Zone. Currently the zone is only supplied by a second pressure reducing station. This will bring the zone into compliance with NAC and TMWA standards.

SCHEDULE: Design and construction planned in FY 2023.



Distribution System Pressure Improvements Tappan 2 Pressure Regulator System

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Tappan 2 PRS	—	250	—	—	—	250

PROJECT DESCRIPTION: The project will provide the Tappan Reg zone with more redundancy and a second source of supply. The location is approximate and subject to easement acquisition and timing.

SCHEDULE: Planned for design/construction in FY 2024 if land acquisition timing allows.



WATER MAIN DISTRIBUTION & SERVICE LINE IMPROVEMENTS

Summary

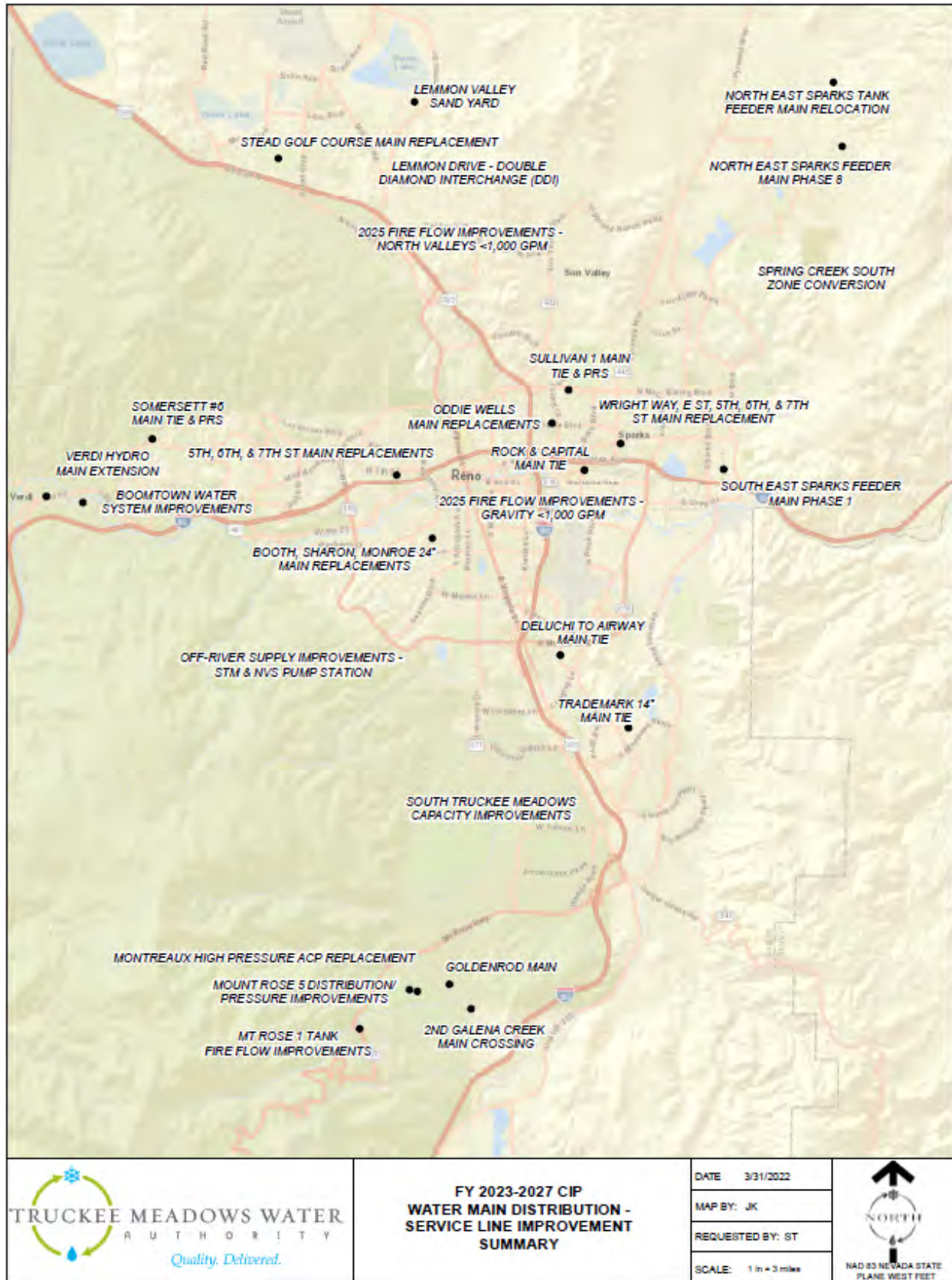
Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Street & Highway Main Replacements	4,200	5,000	5,000	5,000	5,000	24,200
1	Customer Rates	5th, 6th & 7th St. Water Main Replacements	1,170	—	—	—	—	1,170
1	Customer Rates	Wright Way, E St, 5th, 6th & 7th Replacements	1,820	—	—	—	—	1,820
1	Developer Fees	Oddie Wells Main Replacement	1,560	—	—	—	—	1,560
2	Customer Rates	Spring Creek South Zone Conversion	600	200	—	—	—	800
2	Customer Rates	Booth, Sharon Way, Monroe 24" Main Replacements	500	2,000	2,000	1,000	—	5,500
2	Developer Fees	North-East Sparks Tank Feeder Main Relocation	—	—	975	—	—	975
2	Developer Fees	Trademark 14" Main Tie	—	—	—	—	350	350
2	Customer Rates	Mount Rose Tank 1 Fire Flow Improvements	—	400	570	—	—	970
2	Customer Rates / Developer Fees	Stead Golf Course Main Replacement	—	—	170	2,400	—	2,570
1	Developer Fees	North-East Sparks Feeder Main Ph. 8	—	50	2,050	—	—	2,100
1	Developer Fees	Mount Rose 5 Distribution / Pressure Improvements	50	400	—	—	—	450
2	Developer Fees	Goldenrod Main	50	1,200	—	—	—	1,250
1	Developer Fees	Boomtown Water System Improvements	500	1,750	—	—	—	2,250
2	Customer Rates	Lemmon Valley Sand Yard	530	—	—	—	—	530
2	Customer Rates / Developer Fees	Sullivan #1 Main Tie & PRS	—	—	—	100	650	750
2	Customer Rates	Montreux High Pressure ACP Replacement	—	—	520	1,060	—	1,580
2	Customer Rates	2nd Galena Creek Main Crossing	—	40	560	—	—	600
2	Customer Rates	Off-River Supply Improvements - South Truckee Meadows	—	—	—	50	1,050	1,100
2	Customer Rates	Off-River Supply Improvements - North Virginia-Stead Pump Station	—	—	400	—	—	400

Truckee Meadows Water Authority FY 2023 - 2027 Capital Improvement Plan

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Somerset #6 Main Tie & PRS	—	280	—	—	—	280
1	Customer Rates	2025 Fire Flow Improvements - Gravity <1,000 GPM	—	—	—	550	—	550
1	Customer Rates	2025 Fire Flow Improvements - North Valleys <1,000 GPM	—	—	—	940	—	940
2	Developer Fees	Deluchi to Airway Main Tie	—	—	—	440	—	440
1	Developer Fees	South-East Sparks Feeder Main Phase I	—	—	—	50	4,450	4,500
1	Developer Fees	South Truckee Meadows Capacity Improvements	200	800	—	—	—	1,000
2	Customer Rates	Rock & Capital Main Tie	200	—	—	—	—	200
Subtotal Water Main Distribution Improvements			11,380	12,120	12,245	11,590	11,500	58,835

Project Locations: Map of all *Water Main Distribution Service Line Improvements* projects are highlighted in the following map.

Truckee Meadows Water Authority FY 2023 - 2027 Capital Improvement Plan



Water Main-Distribution Service Line Improvements Street & Highway Main Replacements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Street & Highway Main Replacements	4,200	5,000	5,000	5,000	5,000	24,200

PROJECT DESCRIPTION: Provision is made each year for water main replacements in conjunction with repaving efforts by the City of Reno, City of Sparks, Washoe County and RTC. In addition to repaving projects, TMWA coordinates water main replacements with sewer main replacements in areas where TMWA also has older water lines. TMWA plans for approximately \$5.0 million annually for these efforts, so that TMWA can capitalize on repaving projects planned by other entities. Anticipated spending in the out years is reflective of historical activity. Levels of spending can vary year to year and are difficult to predict. These efforts by far are the largest expenditure in the water system rehabilitation category.

SCHEDULE: Projects are identified and prioritized on an annual basis.



Water Main-Distribution Service Line Improvements
5th, 6th & 7th St. Water Main Replacements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	5th, 6th & 7th St. Water Main Replacements	1,170	—	—	—	—	1,170

PROJECT DESCRIPTION: Replace approximately 1,600' of 4" and 6" cast iron main on 5th, 6th and 7th Streets between G and H Street. Work to be completed prior to City of Sparks road reconstruct on same same streets scheduled for summer 2022.

SCHEDULE: Construction is scheduled for FY 2023.



**Water Main-Distribution Service Line Improvements
Wright Way, E St, 5th, 6th & 7th Replacements**

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Wright Way, E St, 5th, 6th & 7th Replacements	1,820	—	—	—	—	1,820

PROJECT DESCRIPTION: Replace approximately 5,800' of 4" and 6" cast iron and transite water main with ductile iron. Perform tie overs, service connections and replacements as needed.

SCHEDULE: Construction is scheduled for FY 2023.



Water Main-Distribution Service Line Improvements Oddie Wells Main Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Developer Fees	Oddie Wells Main Replacement	1,560	—	—	—	—	1,560

PROJECT DESCRIPTION: The project involves replacing approximately 3,500' of cast iron water main. Existing water main to be grouted in place.

SCHEDULE: Construction is scheduled for FY 2023.



Water Main-Distribution Service Line Improvements Spring Creek South Zone Conversion

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Spring Creek South Zone Conversion	600	200	—	—	—	800

PROJECT DESCRIPTION: The project involves construction of approximately 2,800 linear feed of various size water mains, several interties, retirement of several mains and facilities including the existing Spring Creek Tanks. New water mains include 2060 linear feet of 12-inch on Pyramid Highway and 300 linear feet of 8-inch main across Pyramid Highway at Spring Ridge.

SCHEDULE: Implementation and construction will be completed by FY 2024.



Water Main-Distribution Service Line Improvements Booth, Sharon Way, Monroe 24" Main Replacements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Booth, Sharon Way, Monroe 24" Main Replacements	500	2,000	2,000	1,000	—	5,500

PROJECT DESCRIPTION: This project is a continuation of the previously constructed California-Marsh Intertie to provide reliable emergency capacity to the Hunter Creek gravity zone. The project consists of about 6,900 feet of 24-inch main on Booth, Sharon to Plumb Lane and on Monroe between Sharon and Nixon to supply the Nixon-Monroe regulator.

SCHEDULE: Construction is scheduled for FY's 2024-2026. TMWA will attempt to coordinate construction with other municipal infrastructure projects if possible, but the existing pipes will be 74-years old by the proposed construction date.



Water Main-Distribution Service Line Improvements

North-East Sparks Tank Feeder Main Relocation

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Developer Fees	North-East Sparks Tank Feeder Main Relocation	—	—	975	—	—	975

PROJECT DESCRIPTION: The North-East Sparks Tank Feeder Main was constructed in 1988 within private easements several years prior to the construction of South Los Altos Parkway. The final alignment selected for South Los Altos Parkway does not follow the alignment of the tank feeder main. As a result, the tank feeder main now runs through developed properties next to buildings, under parking areas and at considerable depth in some locations. This situation presents potential problems for access to the pipe for maintenance and repair of the critical pipeline. This project will relocate approximately 3,000 feet of the 18-inch tank feeder main out into the public right-of-way in South Los Altos Parkway.

SCHEDULE: Design and the improvements are scheduled for FY 2025.



Water Main-Distribution Service Line Improvements Trademark 14" Main Tie

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Developer Fees	Trademark 14" Main Tie	—	—	—	—	350	350

PROJECT DESCRIPTION: This project involves construction of approximately 350 LF of 14" water main from Trademark to South Meadows Parkway, including crossing of an existing major drainage channel. The project will increase transmission capacity in the Double Diamond system to meet the needs of growth.

SCHEDULE: Construction is scheduled to be completed in FY 2027.



Water Main-Distribution Service Line Improvements Mount Rose Tank 1 Fire Flow Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Mount Rose Tank 1 Fire Flow Improvements	—	400	570	—	—	970

PROJECT DESCRIPTION: The project involves reconstruction of an existing PRS at Mt. Rose Tank #1, a new PRS on Blue Spruce and approximately 3100 linear feet of 10-inch water main on Blue Spruce and Douglas Fir to increase system pressure and fire flow capacity to existing customers in Galena Forest Estates. Existing fire flows are currently less than 1,000 GPM in the area.

SCHEDULE: Planning and design will be completed in FY 2024. Construction will occur in FY's 2024-2025.



Water Main-Distribution Service Line Improvements Stead Golf Course Main Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates / Developer Fees	Stead Golf Course Main Replacement	—	—	170	2,400	—	2,570

PROJECT DESCRIPTION: The project consists of replacement of about 10,000 feet of 14-inch steel pipe installed around 1945. The pipe provides an important hydraulic tie between the Stead tanks and the northeast extremities of the Stead distribution system. The pipeline may also be useful to alleviate an existing bottleneck between the Stead wells and the distribution system.

SCHEDULE: The project is scheduled for construction in FY 2026.



Water Main-Distribution Service Line Improvements North-East Sparks Feeder Main Ph. 8

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Developer Fees	North-East Sparks Feeder Main Ph. 8	—	50	2,050	—	—	2,100

PROJECT DESCRIPTION: The project involves construction of approximately 6,400 linear feet of 14-inch water main on Satellite Drive from Vista Blvd to Sparks Blvd to increase capacity for growth in Spanish Springs and maintain adequate suction pressure at the Satellite Hills booster pump station.

SCHEDULE: Design is scheduled for FY 2024 and the improvements will be constructed in FY 2025.



Water Main-Distribution Service Line Improvements Mount Rose 5 Distribution / Pressure Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Developer Fees	Mount Rose 5 Distribution / Pressure Improvements	50	400	—	—	—	450

PROJECT DESCRIPTION: Improvements are intended to provide off-peak conjunctive use supply. The proposed improvements are intended to be consistent with future improvements to improve peaking supply to the Mt. Rose system and will reduce pressure in the high pressure pipeline downhill of Mt. Rose Well 5. It will also increase the off-peak pumping capacity of surface water into the Mt. Rose 1 and 4 tanks to 650 gpm from 400 gpm. Future phases are intended to increase system redundancy and further reduce high pressures in the system.

SCHEDULE: Construction is scheduled for FY 2024.



Water Main-Distribution Service Line Improvements Goldenrod Main

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Developer Fees	Goldenrod Main	50	1,200	—	—	—	1,250

PROJECT DESCRIPTION: The project involves construction of approximately 4,500 LF of 12" water main from the Tessa West Well to the intersection of Goldenrod and Mountain Meadows Lane. This project will provide additional capacity between the Arrowcreek and Mt. Rose systems for Mt. Rose 2 tank fills and for on-peak supply from the Mt. Rose Water Treatment Plant.

SCHEDULE: Design is planned in FY 2023 and construction is planned in FY 2024.



Water Main-Distribution Service Line Improvements Boomtown Water System Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Developer Fees	Boomtown Water System Improvements	500	1,750	—	—	—	2,250

PROJECT DESCRIPTION: The Boomtown system requires several high priority improvements to bring the system into compliance with NAC 445A regulations and TMWA standards and to allow efficient operation and maintenance of the water facilities. The improvements consist of upgrades to three existing wells (pump to waste facilities, SCADA, new pumps, new motors, new starters and arc flash analyses), tank site improvements (grading, drainage, overflow, fencing, paving, sampling vault, SCADA) and tank access improvements.

SCHEDULE: The improvements will be designed and constructed in FY's 2023-2024.



Water Main-Distribution Service Line Improvements Lemmon Valley Sand Yard

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Lemmon Valley Sand Yard	530	—	—	—	—	530

PROJECT DESCRIPTION: With continued growth in the area including the acquisition of the Lemmon Valley water system formerly owned by Washoe County, it is very inefficient for TMWA crews to respond to a main break or other major issue in the North Valleys and have to either return to the Truckee Meadows or call out a second crew to transport materials to the site to complete the repairs. To increase the efficiency of maintenance operations in the North Valleys, TMWA plans to improve the balance of the 1.25 acre lot surrounding Lemmon Valley Well #6 (near the intersection of Lemmon Drive and Arkansas Drive) to store the common materials such as sand and base rock normally used in water system maintenance. The improvements consist of import, grading, fencing, drainage, material storage bins, lighting and landscaping. The project has been designed and the building permit has been acquired.

SCHEDULE: Planned for construction in FY 2023 pending zoning compliance.



Water Main-Distribution Service Line Improvements Sullivan #1 Main Tie & PRS

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates / Developer Fees	Sullivan #1 Main Tie & PRS	—	—	—	100	650	750

PROJECT DESCRIPTION: The project involves construction of about 1,300 LF of 10” main on El Rancho and a new PRS to supply the Sullivan #1 zone. The project timeline assumes that the proposed Sun Valley #2 Tank and Sullivan #2 pump station are in service.

SCHEDULE: Planning and design is scheduled to begin in FY 2026 with construction scheduled in FY 2027.



Water Main-Distribution Service Line Improvements Montreux High Pressure ACP Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Montreux High Pressure ACP Replacement	—	—	520	1,060	—	1,580

PROJECT DESCRIPTION: The project involves replacement of approximately 6,500 linear feet of existing 10-inch transite water main between Mt Rose Well #5 and Joy Lake Road. The existing ACP pipe installed in the 1970's is currently operated at pressures between 120-250 psi.

SCHEDULE: Planning and design will occur in FY 2025 with construction to be completed in FY 2026.



Water Main-Distribution Service Line Improvements 2nd Galena Creek Main Crossing

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	2nd Galena Creek Main Crossing	—	40	560	—	—	600

PROJECT DESCRIPTION: The project involves construction of approximately 2,200 linear feet of 10-inch ductile iron water main between Breithorn Cir. and Piney Creek Parklet including a crossing of Galena Creek. The existing 10" ACP pipe that crosses Galena Creek is currently the only tie between well sources and storage tanks.

SCHEDULE: Design will occur in FY 2024 with construction to be completed in FY 2025.



Water Main-Distribution Service Line Improvements Off-River Supply Improvements - South Truckee Meadows

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Off-River Supply Improvements - South Truckee Meadows	—	—	—	50	1,050	1,100

PROJECT DESCRIPTION: The project involves construction of four SCADA controlled, pressure reducing bypass stations in strategic locations in the South Truckee Meadows to allow excess well capacity and excess Mt. Rose Water Treatment Plant capacity to be provided to the Highland gravity zone in case of loss supply from the Truckee River. Two additional bypasses (Arrowcreek BPS & future Veteran's BPS) will be constructed separately under the budget for those facilities.

SCHEDULE: Planning and design will occur in FY 2026 with construction to be completed in FY 2027.



Water Main-Distribution Service Line Improvements Off-River Supply Improvements - North Virginia-Stead Pump Station

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Off-River Supply Improvements - North Virginia-Stead Pump Station	—	—	400	—	—	400

PROJECT DESCRIPTION: The project involves construction of a SCADA controlled, pressure reducing bypass station at the North Virginia-Stead booster pump station to allow excess Fish Springs well capacity to be provided to the Highland gravity zone in case of loss supply from the Truckee River.

SCHEDULE: Project implementation and construction will occur in FY 2025.



Water Main-Distribution Service Line Improvements Somerset #6 Main Tie & PRS

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Somerset #6 Main Tie & PRS	—	280	—	—	—	280

PROJECT DESCRIPTION: The project involves construction of about 600 linear feet of 10-inch main within improved paved pathway and a new pressure regulator station to provide a secondary source to Somerset Village 6.

SCHEDULE: Project implementation and construction will occur in FY 2024.



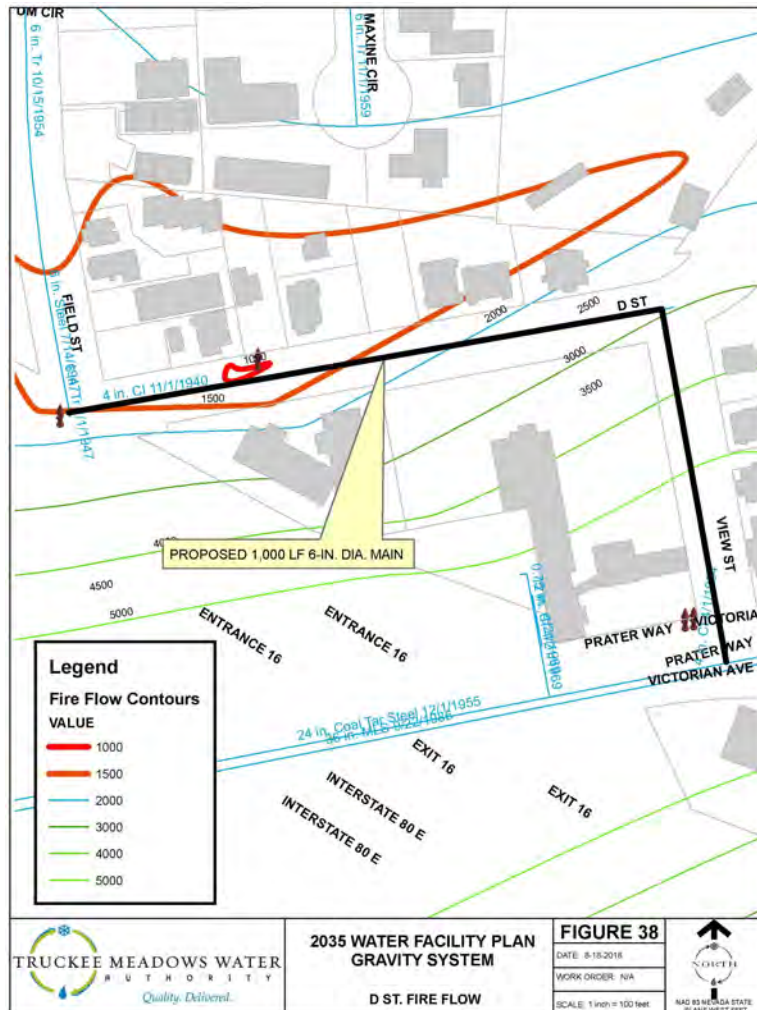
Water Main-Distribution Service Line Improvements 2025 Fire Flow Improvements - Gravity <1,000 GPM

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	2025 Fire Flow Improvements - Gravity <1,000 GPM	—	—	—	550	—	550

PROJECT DESCRIPTION: The project involves improvements at 5 separate locations in the gravity zone that have an available fire flow of less than 1000 GPM. Reference Pages 20-22 of the 2035 WFP – Items 14,18,20,25,31 (also Figures 38,42,44,49,55). Construction consists of approximately 1,900 linear feet of new 6-inch & 8-inch main including new hydrant taps and laterals.

SCHEDULE: The improvements are scheduled for construction in FY 2026.



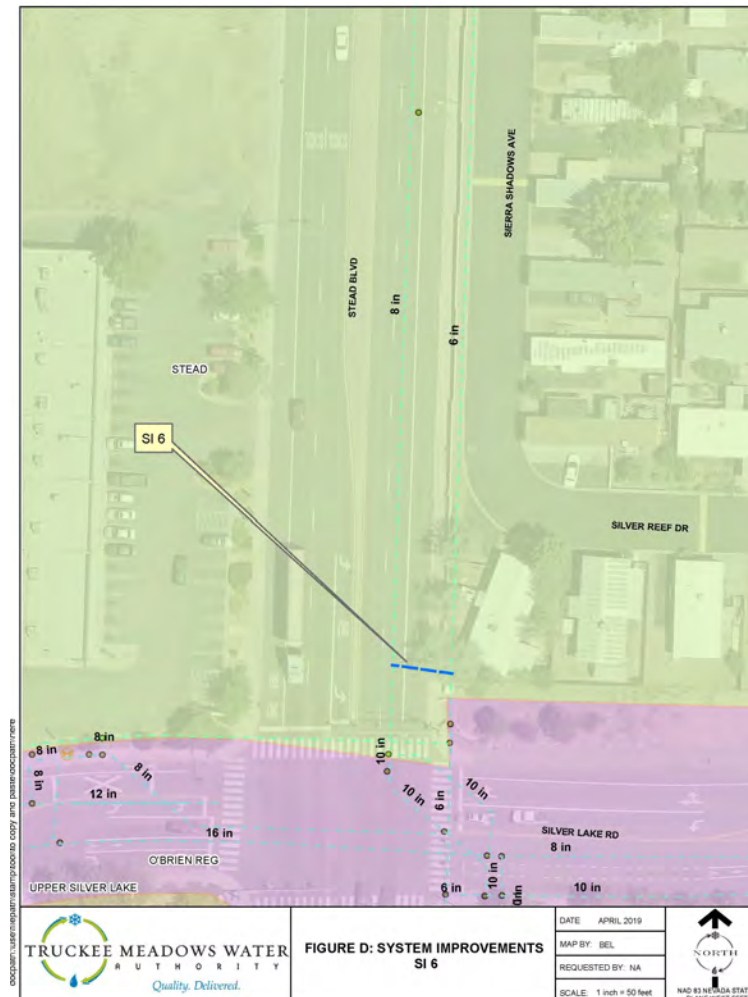
Water Main-Distribution Service Line Improvements 2025 Fire Flow Improvements - North Valleys <1,000 GPM

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	2025 Fire Flow Improvements - North Valleys <1,000 GPM	—	—	—	940	—	940

PROJECT DESCRIPTION: This project involves improvements at two separate locations that have an available fire flow of less than 1,000 GPM. Reference Items SI6 and SI7 on pages 6-7 of the North Valleys section of the 2035 Water Facilities Plan (also Figures D and E). Construction of approximately 3,500 linear feet of new 6-inch and 8-inch main and new high pressure Regulating Station.

SCHEDULE: The improvements are scheduled for construction in FY 2026.



Water Main-Distribution Service Line Improvements Deluchi to Airway Main Tie

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Developer Fees	Deluchi to Airway Main Tie	—	—	—	440	—	440

PROJECT DESCRIPTION: The project involves construction of approximately 1,200 linear feet of 14-inch main from Deluchi to Airway including crossing a major storm drainage channel. The project promotes looping of the distribution system and provides additional North to South peak period capacity.

SCHEDULE: The project is scheduled for construction in FY 2026.



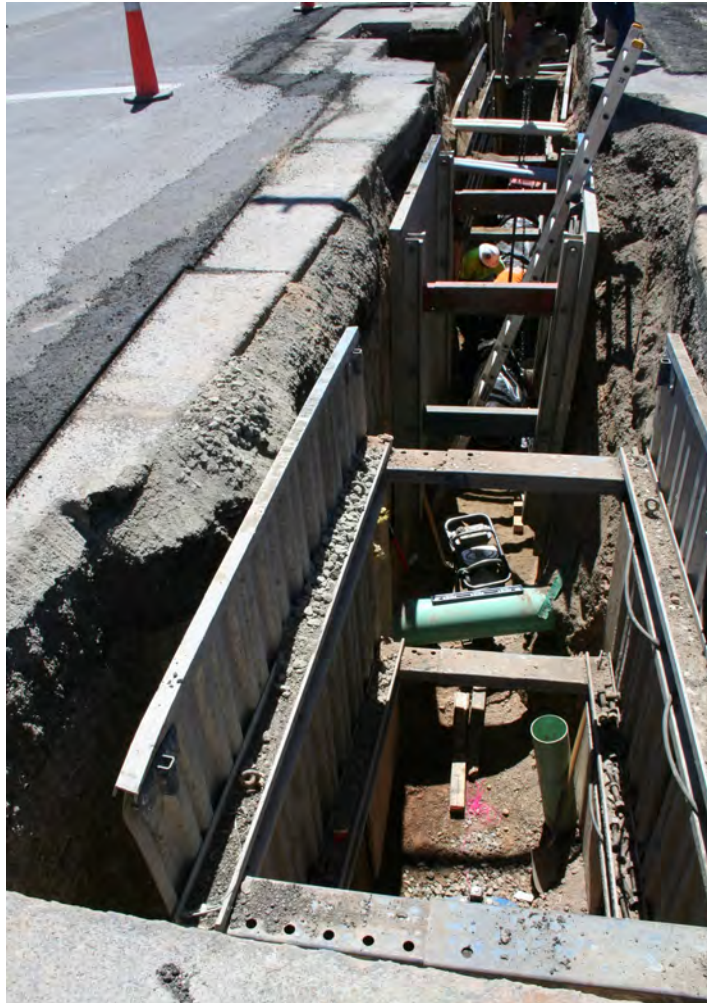
Water Main-Distribution Service Line Improvements South-East Sparks Feeder Main Phase 1

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Developer Fees	South-East Sparks Feeder Main Phase 1	—	—	—	50	4,450	4,500

PROJECT DESCRIPTION: The project involves construction of approximately 9,700 linear feet of 24-inch main on Greg Street between 21st Street and Stanford to provide additional capacity for future growth and to lower peak period pressure in the area.

SCHEDULE: Planning and design are scheduled to begin in FY 2026 and construction is scheduled to begin in FY 2027.



Water Main-Distribution Service Line Improvements South Truckee Meadows Capacity Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Developer Fees	South Truckee Meadows Capacity Improvements	200	800	—	—	—	1,000

PROJECT DESCRIPTION: The project involves construction of approximately 1,500 linear feet of 14-inch main on Offenhauser and Gateway with a SCADA controlled valve installed in an underground vault to provide an intertie between the Longley and Double Diamond systems. Also included is a short 8-inch main tie at Bluestone and Portman. The improvements increase capacity to the South Truckee Meadows system.

SCHEDULE: Design for the project is scheduled to begin in FY 2023 and construction is scheduled for FY 2024.



Water Main-Distribution Service Line Improvements

Rock & Capital Main Tie

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Rock & Capital Main Tie	200	—	—	—	—	200

PROJECT DESCRIPTION: This project adds redundancy to the industrial area of Mill/Rock/Capital Blvd. It includes 700 linear feet of 12" main in Rock between Edison and Capital to reduce an outage of entire industrial area during a main shutdown due to leak repair.

SCHEDULE: Design and Construction planned in FY 2023.



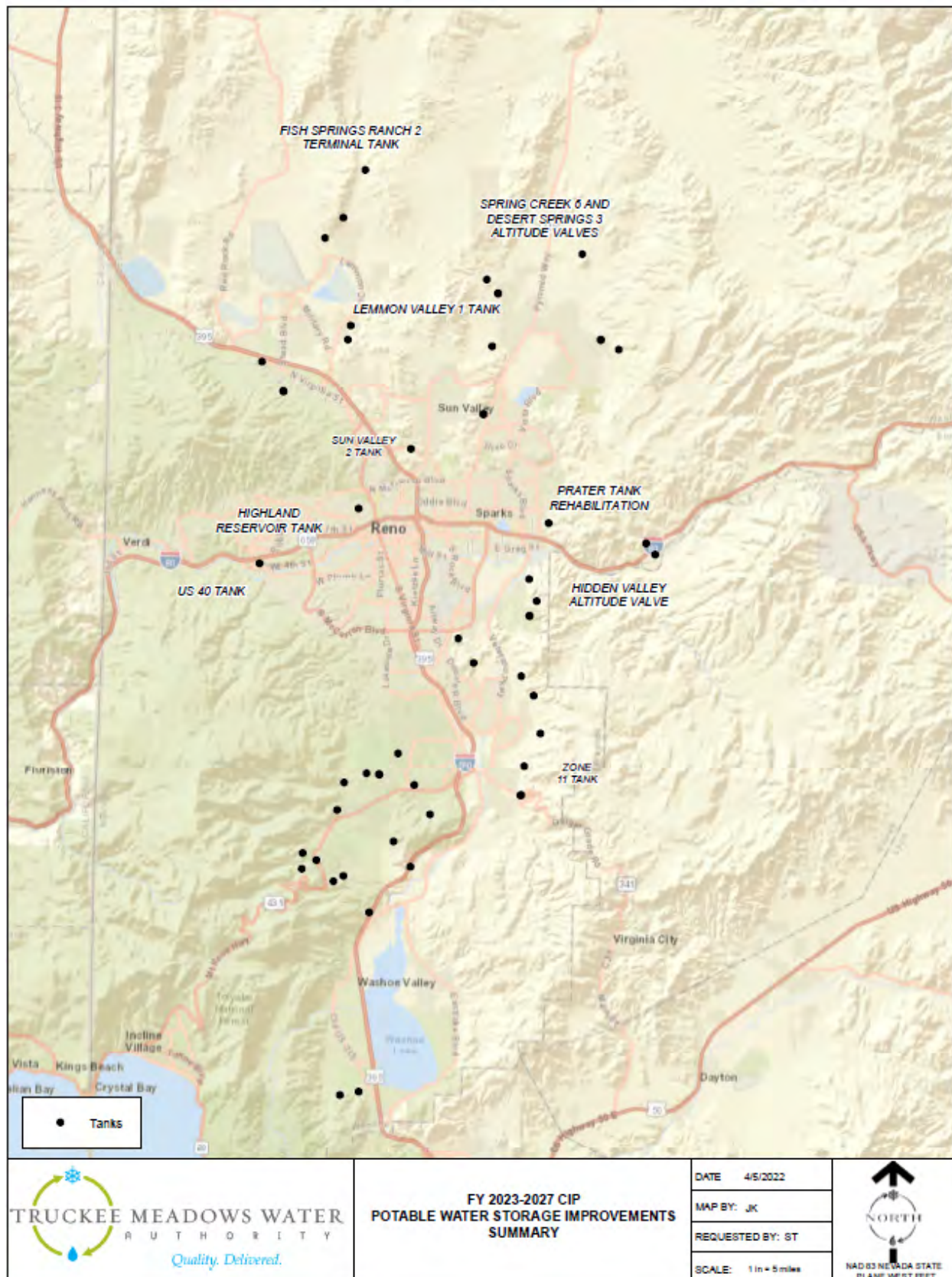
POTABLE WATER STORAGE IMPROVEMENTS

Summary

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates / Developer Fees	Sun Valley #2 Tank	—	—	420	2,980	—	3,400
2	Developer Fees	Fish Springs Terminal Tank #2	—	—	—	—	40	40
1	Customer Rates	Storage Tank Recoats; Access; Drainage Improvements	3,500	4,000	4,000	4,000	4,500	20,000
2	Customer Rates / Developer Fees	Highland Reservoir Tank	1,000	2,000	4,700	—	—	7,700
1	Customer Rates / Developer Fees	STMGID Tank East Zone 11 Tank	—	—	—	175	2,900	3,075
1	Customer Rates / Reimbursements / Developer Fees	US 40 Tank & Feeder Main	2,150	2,530	—	—	—	4,680
2	Customer Rates / Developer Fees	Spanish Springs Altitude Valves (SC6 & DS3)	—	300	—	—	—	300
2	Customer Rates	Hidden Valley Tank Altitude Valve	—	350	—	—	—	350
1	Customer Rates	Lemmon Valley Tank #1 Replacement and Patrician PRS	250	750	—	—	—	1,000
1	Customer Rates	Hidden Valley Tank #4 Outage Improvements	250	250	—	—	—	500
Subtotal Storage Improvements			7,150	10,180	9,120	7,155	7,440	41,045

Project Locations: Map of all *Potable Water Storage Improvements* projects are highlighted in the following map.

Truckee Meadows Water Authority FY 2023 - 2027 Capital Improvement Plan



Potable Water Storage Improvements Sun Valley #2 Tank

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates / Developer Fees	Sun Valley #2 Tank	—	—	420	2,980	—	3,400

PROJECT DESCRIPTION: TMWA continues to analyze opportunities to consolidate pump zones to eliminate future pump station replacement costs and to increase reliability to continuous pumping zones. Several years ago, TMWA consolidated the Sutro #1 pump zone with the Sun Valley/Sullivan pump zone, placing additional capacity requirements on the Sun Valley zone. This tank is needed to provide the required emergency storage capacity to the expanded zone and will also provide the capacity for the Sun Valley zone to reach build-out.

SCHEDULE: The project is scheduled for construction in FY 2026 subject to successful acquisition of a suitable tank site which is elevation sensitive and is complicated by the US 395 Connector project alignment.



Potable Water Storage Improvements

Fish Springs Terminal Tank #2

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Developer Fees	Fish Springs Terminal Tank #2	—	—	—	—	40	40

PROJECT DESCRIPTION: Ultimately, a second 2.5 MG storage tank is needed at the terminus of the Fish Springs pipeline at the north end of Lemmon Valley to equalize demand and supply during peak use periods.

SCHEDULE: The project is currently scheduled for design in FY 2027 with construction to follow in FY 2028. The actual schedule will be dependent upon the rate of growth in the North Valleys.



Potable Water Storage Improvements

Storage Tank Recoats; Access; Drainage Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Storage Tank Recoats; Access; Drainage Improvements	3,500	4,000	4,000	4,000	4,500	20,000

PROJECT DESCRIPTION: TMWA has a very proactive tank reservoir maintenance program where 20% of all tanks are inspected annually on a rotating basis. Based on these inspection observations, a determination is made as to whether interior tank coatings (for steel tanks) or other fix and finish work is required. TMWA has 95 storage tanks in service, with combined storage of approximately 121 million gallons. Interior coating/liners are generally replaced every 20 years resulting in the need to recoat several tanks per year to maintain the rehabilitation cycle. The budget and plan also includes exterior painting of steel tanks and any replacement of any interior components that may be corroded.

SCHEDULE: This is an ongoing annual project. It is anticipated that several tanks will need to be recoated every year.



Potable Water Storage Improvements Highland Reservoir Tank

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates / Developer Fees	Highland Reservoir Tank	1,000	2,000	4,700	—	—	7,700

PROJECT DESCRIPTION: TMWA has two large finished water storage reservoirs, one at Hunter Creek and one at the Highland site just west of the intersection of Washington and College Drive. These reservoirs are lined and covered with flexible polyethylene or hypalon membranes. As such, they are more maintenance intensive and susceptible to damage than a conventional steel or concrete tank. To provide reliability during repairs or during extended outages for inspection and cleaning, it is proposed to construct a conventional 4 million gallon water storage tank at the reservoir site. Due to topography and proximity to residential areas the tank may need to be a buried pre-stressed concrete tank, which is reflected in the project budget. The tank will also provide additional storage capacity to meet future system requirements as required by the NAC regulations.

SCHEDULE: The tank is scheduled for construction in FY's 2023-2025.



Potable Water Storage Improvements STMGID Tank East (Zone 11 Tank)

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates / Developer Fees	STMGID Tank East Zone 11 Tank	—	—	—	175	2,900	3,075

PROJECT DESCRIPTION: The project involves construction of a 3.7 MG above ground welded steel storage tank in the South Truckee Meadows area off of Geiger Grade formerly owned by STMGID. Due to growth in the area over the last several years, additional storage is required to meet the requirements of the NAC 445A regulations and TMWA standards. The tank will replace an existing 0.75 MG tank providing a net increase in storage of about 3 MG.

SCHEDULE: The project is currently scheduled for construction in FY 2027, subject to acquisition of the Special Use Permit and Bureau of Land Management (BLM) permitting.



Potable Water Storage Improvements US 40 Tank & Feeder Main

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates / Reimbursements / Developer Fees	US 40 Tank & Feeder Main	2,150	2,530	—	—	—	4,680

PROJECT DESCRIPTION: The project involves construction of two 800,000 gallon steel tanks with site improvements, utilities, drain line and access road including about 2,100 LF of 20" feeder main. The project will improve reliability and hydraulic performance in the zone which experiences a lot of surge issues due to cycling of the Mae Anne pump train and the closed system on the Mogul end. This situation is only expected to worsen when pumping to Verdi begins.

SCHEDULE: The project is currently scheduled for design in FY's 2023-2024 and construction in FY 2024.



Potable Water Storage Improvements

Spanish Springs Altitude Valves

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates / Developer Fees	Spanish Springs Altitude Valves (SC6 & DS3)	—	300	—	—	—	300

PROJECT DESCRIPTION: The project involves the construction of altitude valves in underground vaults at the Desert Springs Tank #3 and at Spring Creek Tank #6. The altitude valves will keep the existing tanks from overflowing when well recharge operations are conducted in Spanish Springs Valley.

SCHEDULE: Implementation and construction will occur in FY 2024.



Potable Water Storage Improvements Hidden Valley Tank Altitude Valve

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Hidden Valley Tank Altitude Valve	—	350	—	—	—	350

PROJECT DESCRIPTION: The project involves installation of a new altitude valve in a vault on the Hidden Valley Tank #1 in/out line. Requires cutting into and rerouting existing piping, addition of new valves, etc.

SCHEDULE: The project is schedule for construction in FY 2024.



Potable Water Storage Improvements
Lemmon Valley Tank #1 Replacement and Patrician PRS

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Lemmon Valley Tank #1 Replacement and Patrician PRS	250	750	—	—	—	1,000

PROJECT DESCRIPTION: Lemmon Valley Tank 1 is at the end of it's useful life and needs to be replaced. The tank can't be taken out of service without improvements to the system. The Patrician PRS would provide supply with the tank out of service and allow the existing tank to be demolished and the new tank to be constructed.

SCHEDULE: Design will occur in FY 2023. Construction is scheduled in FY 2024.



Potable Water Storage Improvements
Hidden Valley Tank #4 Outage Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Hidden Valley Tank #4 Outage Improvements	250	250	—	—	—	500

PROJECT DESCRIPTION: Hidden Valley Tank #4 is due for rehabilitation and recoating in the next year. The tank cannot be taken out of service and meet all NAC requirements including fire flow. This project will improve redundancy and supply to the zone with the tank out of service.

SCHEDULE: Design will occur in FY 2023. Construction is scheduled in FY 2024.



HYDROELECTRIC IMPROVEMENTS**Summary**

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Forebay, Diversion, and Canal Improvements	100	100	100	100	100	500
3	Customer Rates	Flume Rehabilitation	—	—	150	150	—	300
3	Customer Rates	Hydro Plant Generator Rewinds	—	650	—	—	—	650
1	Customer Rates	Washoe Plant Turbine Rebuild and Rebuild/Replacement Unit 1	250	2,750	—	—	—	3,000
2	Customer Rates	Washoe Plant Turbine Rebuild and Rebuild/Replacement Unit 2	250	2,750	—	—	—	3,000
Subtotal Hydroelectric Improvements			600	6,250	250	250	100	7,450

Project Locations: Map of all *Hydroelectric Improvements* projects are highlighted in the following map.

Truckee Meadows Water Authority FY 2023 - 2027 Capital Improvement Plan



Hydroelectric Improvements

Forebay, Diversion, and Canal Improvements

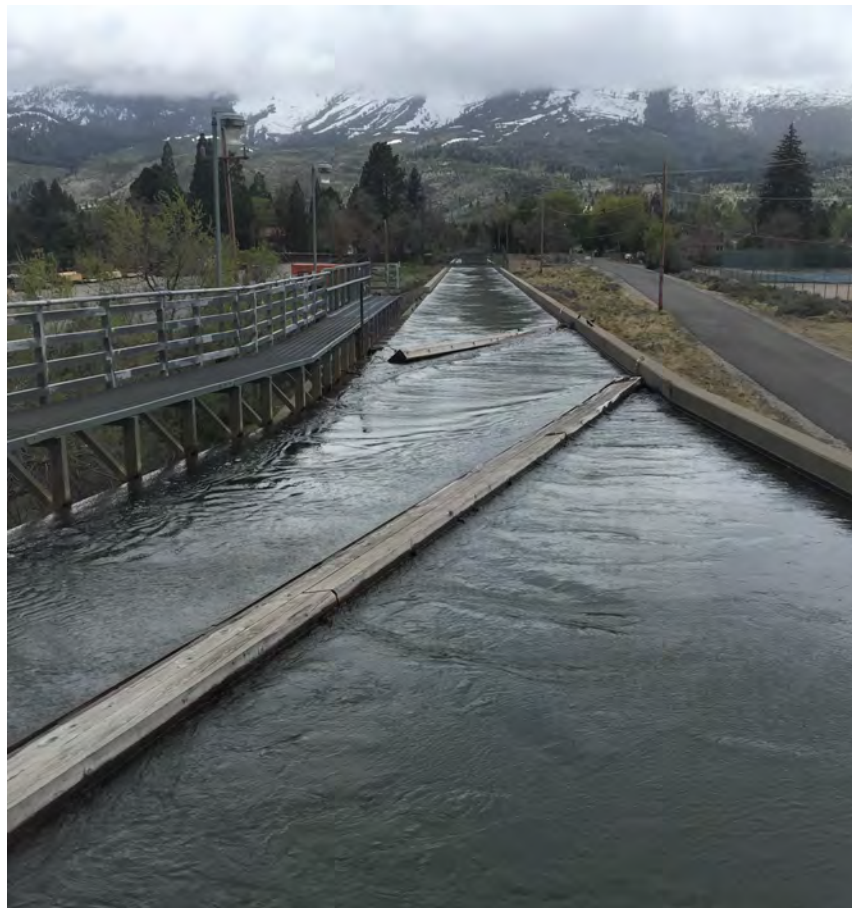
FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Forebay, Diversion, and Canal Improvements	100	100	100	100	100	500

PROJECT DESCRIPTION:

Provision is made each year for hydroelectric flume reconstruction to mitigate damage from unexpected rock falls, landslides and/or flooding events. Diversion structures including gates, canals, flumes, forebays and all hydro-plant water conveyance structures are monitored and evaluated for reliable and safe operation.

SCHEDULE: Ongoing annual evaluation and prioritization of forebay and canal conditions in the early spring (winter weather can change priorities) to identify projects for fall construction when historically, river flows are lower.



Hydroelectric Improvements Flume Rehabilitation

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
3	Customer Rates	Flume Rehabilitation	—	—	150	150	—	300

PROJECT DESCRIPTION: TMWA’s three operating hydroelectric facilities have nearly 12,150 feet of flume. The average service life for flume structures is 35 years using treated timbers, at an average replacement cost of approximately \$1,000 per lineal foot of flume. The present cost to replace a linear foot of flume depends on the location and height of the flume structure.

SCHEDULE: Ongoing annual evaluation and prioritization of flume condition in the early spring (winter weather can change priorities) to identify projects for fall construction when historically, river flows are lower.



Hydroelectric Improvements

Hydro Plant Generator Rewinds

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
3	Customer Rates	Hydro Plant Generator Rewinds	—	650	—	—	—	650

PROJECT DESCRIPTION:

The Fleish generator was last rewound in 1958 and is still operational. The typical in-service life of this type of generator is about 50 years.

SCHEDULE: This schedule is assessed as needed and may be adjusted depending on river flows and generator condition evaluation.



Hydroelectric Improvements

Washoe Plant Turbine Rebuild and Rebuild/Replacement of Unit 1

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Washoe Plant Turbine Rebuild and Rebuild/Replacement Unit 1	250	2,750	—	—	—	3,000

PROJECT DESCRIPTION: The project involves replacing the No. 1 Hydroelectric Turbine, complete a rewind of the Unit 1 Generator. To expedite completion of the project and minimize the plant outage time, procurement of the new No. 1 Turbine as well as fabrication of the two new Tailraces will be completed first as a separate project. Replace the No. 1 Plant Turbine and rewind the associated generator. The turbine will be dismantled with the pressure case and Turbine appurtenances removed from the building. Work for rewinding the No. 1 Generator will commence as soon as the plant is taken off line for the project. The new No. 1 Turbine will be installed and the associated rewind generator re-installed.

SCHEDULE: Construction is scheduled for FY 2024.



Hydroelectric Improvements

Washoe Plant Turbine Rebuild and Rebuild/Replacement of Unit 2

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Washoe Plant Turbine Rebuild and Rebuild/Replacement Unit 2	250	2,750	—	—	—	3,000

PROJECT DESCRIPTION: This project will replace the No. 2 Hydroelectric Turbine and complete a rewind of the Unit 2 Generator. To expedite completion of the project and minimize the unit outage time, the No. 2 Turbine will be procured before work begins. Once equipment is procured, work will begin for completing the Unit 2 Generator rewind and dismantling of the No. 2 Turbine pressure cases and appurtenances. The new No. 2 Turbine will be installed and the rewind generator re-installed.

SCHEDULE: Construction is scheduled for FY 2024.



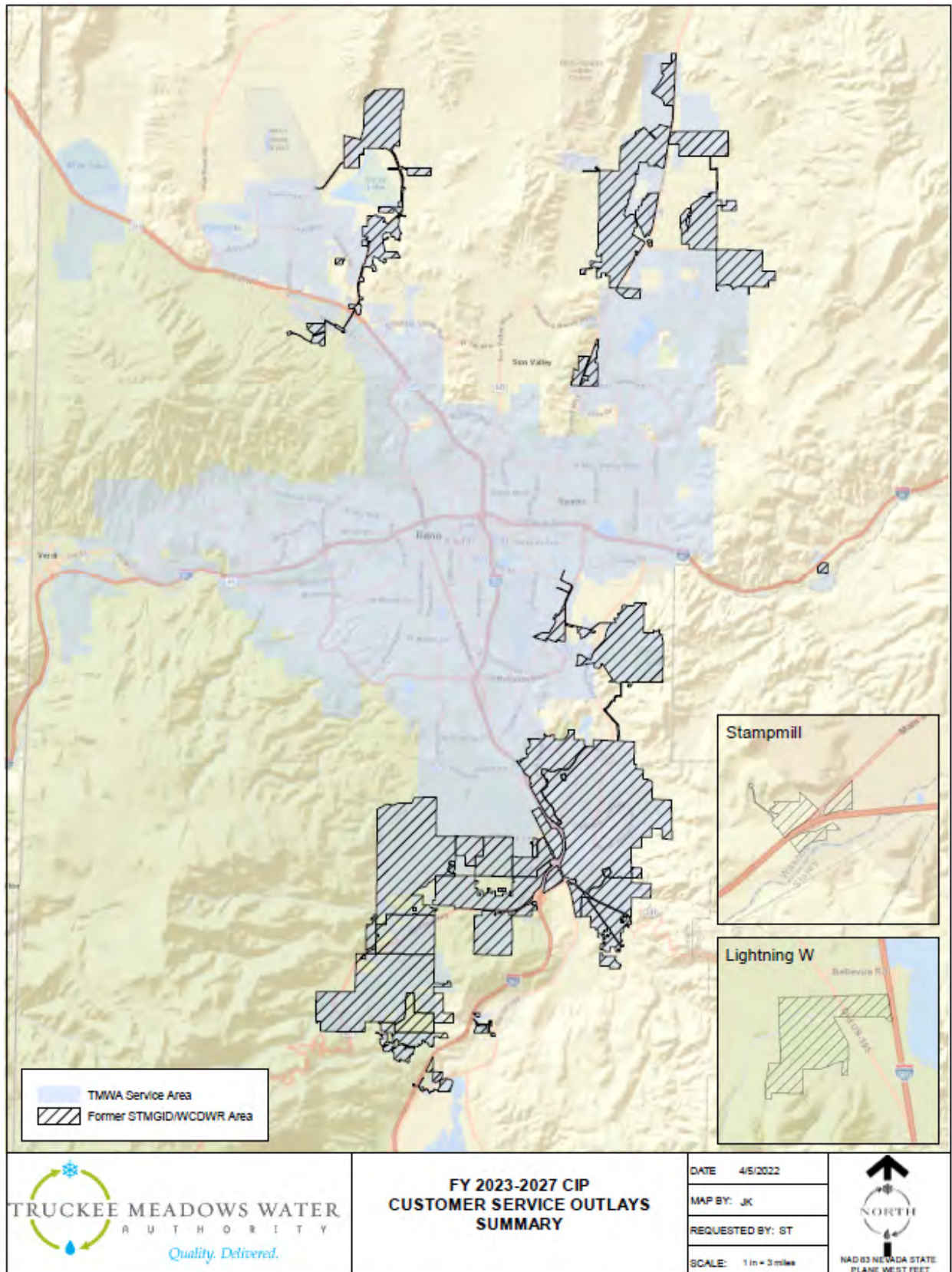
CUSTOMER SERVICE OUTLAYS

Summary

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
3	Customer Rates	Meter Reading Equipment	—	75	—	—	—	75
2	Developer Fees	New Business Meters	100	100	100	100	100	500
1	Customer Rates	Mueller Pit Replacements former Washoe County	125	125	125	125	125	625
2	Customer Rates	Galvanized / Poly Service Line Replacements	250	250	250	250	250	1,250
1	Customer Rates / Meter Retrofit Fees	Automated Meter Infrastructure (AMI)	2,300	5,000	6,000	6,200	—	19,500
Subtotal Customer Service			2,775	5,550	6,475	6,675	475	21,950

Project Locations: Map of all *Customer Service Outlays* projects are highlighted in the following map.

Truckee Meadows Water Authority FY 2023 - 2027 Capital Improvement Plan



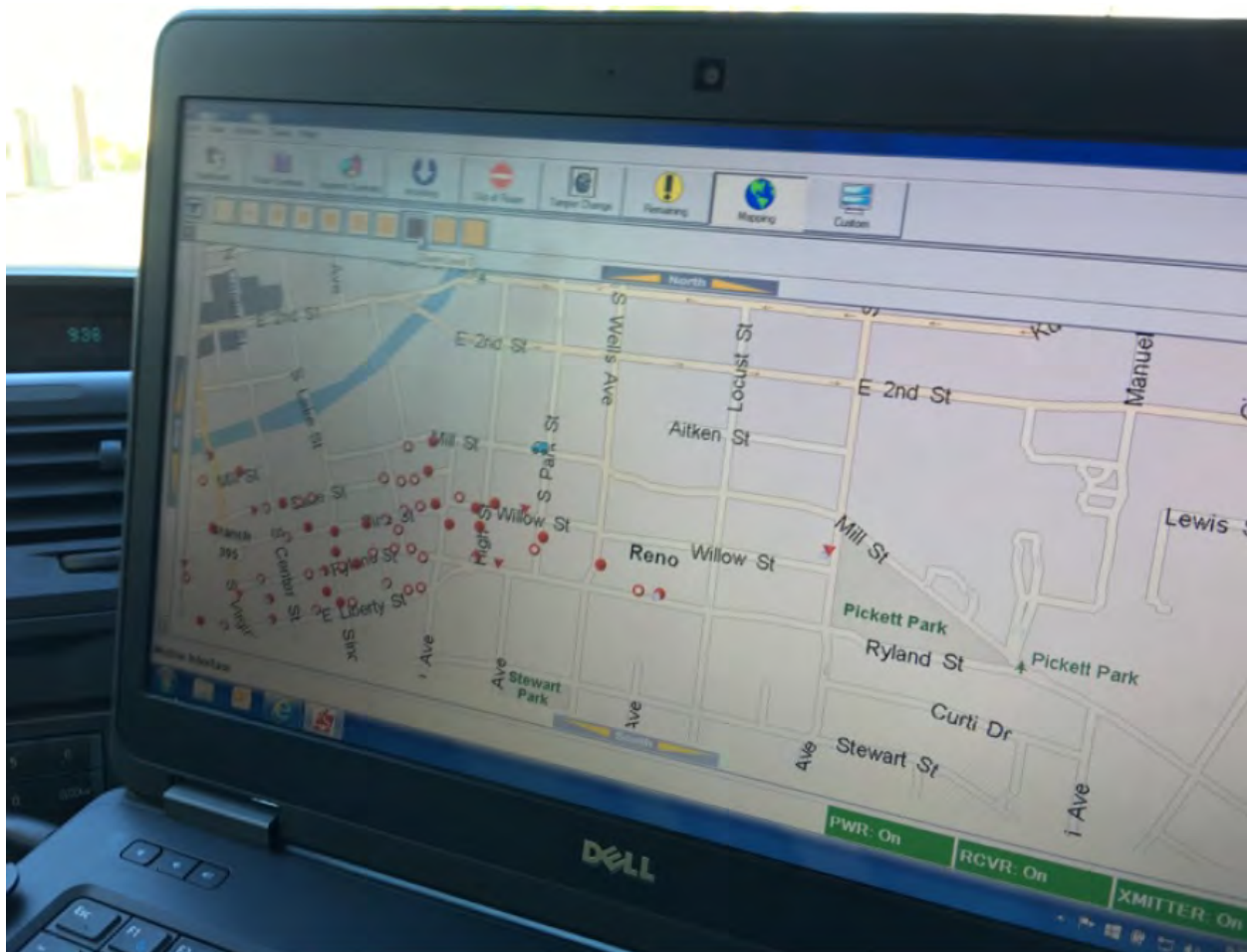
Customer Service Outlays Meter Reading Equipment

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
3	Customer Rates	Meter Reading Equipment	—	75	—	—	—	75

PROJECT DESCRIPTION: TMWA utilizes a multiple meter reading systems in which the transmitters attached to the meters send a signal out to be collected by data collectors. These collectors are mounted in the meter reading vehicles or on various mountain peaks surrounding the valley. TMWA is anticipating replacing units that have degraded.

SCHEDULE: Will need to purchase equipment on an as needed basis.



Customer Service Outlays

New Business Meters

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Developer Fees	New Business Meters	100	100	100	100	100	500

PROJECT DESCRIPTION: All new water services are required to be metered. Meters are purchased by TMWA and installed for new development. New business fees pay for these installations.

SCHEDULE: As development picks up, more meters will need to be purchased.



Customer Service Outlays
Mueller Pit Replacements Former Washoe County

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Mueller Pit Replacements former Washoe County	125	125	125	125	125	625

PROJECT DESCRIPTION: The Mueller metering pits are a very high maintenance metering facility and are prone to leaks and failures. TMWA plans to replace these facilities in response to leaks and or subsidence of these facilities.

SCHEDULE: Equipment and employee needs are evaluated and updated annually.



Customer Service Outlays

Galvanized / Poly Service Line Replacements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Galvanized / Poly Service Line Replacements	250	250	250	250	250	1,250

PROJECT DESCRIPTION: TMWA has shifted from just repairing service lines from the street main to the curb valve or meter box to completely replacing service lines that are galvanized steel or polybutylene. These two materials are responsible for many after-hours call outs which escalate overtime expenses to repair leaks in the street because the galvanized lines are corroded, and polybutylene once thought very durable, becomes brittle and cracks or splits very easily. Just repairing these lines does not prevent them from leaking in the near future, escalating repair costs while further damaging city streets. Complete replacement provides a permanent repair in a cost effective manner and prevents further water system losses.

SCHEDULE: This is an ongoing annual project budget. Service lines will be replaced as they are identified.



Customer Service Outlays

AMI Automated Meter Infrastructure

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates / Meter Retrofit Fees	Automated Meter Infrastructure (AMI)	2,300	5,000	6,000	6,200	—	19,500

PROJECT DESCRIPTION: TMWA utilizes multiple meter reading systems in which the transmitters attached to the meters send a signal out to be collected by data collectors. Over the next four years, TMWA will be installing new meters or retrofitting existing meters with technology that will allow for remote readings. This is expected to assist in quickly identifying leaks for customers, more accurate billing, and long-term cost savings.

SCHEDULE: This project has begun as of July 1, 2022 and is expected to be completed in FY 2026.



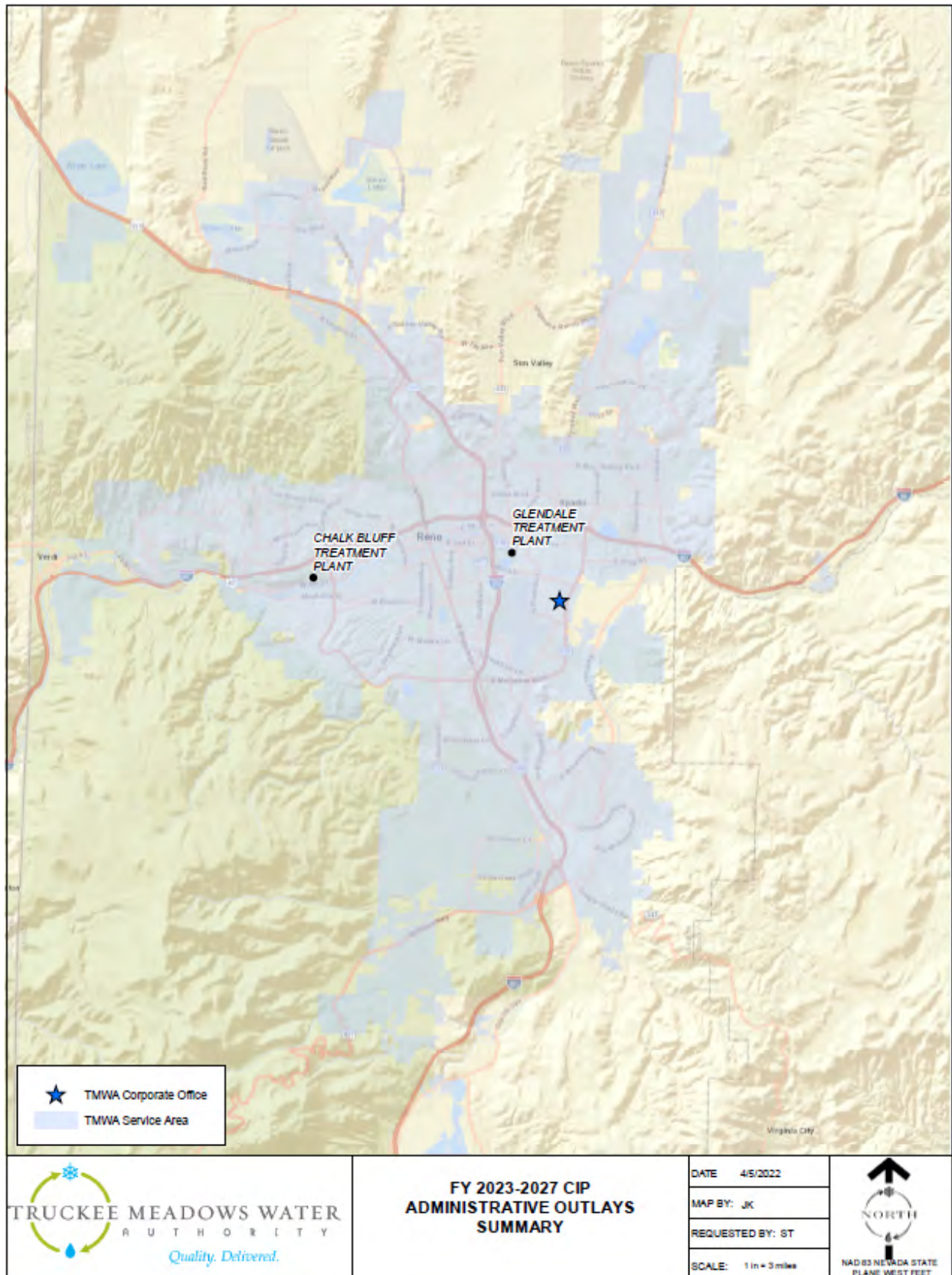
ADMINISTRATIVE OUTLAYS

Summary

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	GIS / GPS System Mapping Equipment	45	20	—	—	—	65
2	Customer Rates	IT Server Hardware	45	30	—	—	—	75
2	Customer Rates	IT Network Security Upgrades	70	10	—	—	—	80
2	Customer Rates	IT Physical Access Security Upgrades	60	60	—	—	—	120
2	Customer Rates	Printer / Scanner Replacement	—	100	—	—	—	100
3	Customer Rates	Crew Trucks / Vehicles	900	850	950	1,000	1,100	4,800
1	Customer Rates	Emergency Management Projects	150	150	150	150	150	750
1	Customer Rates	Emergency Operations Annex Design / Construction	—	250	250	1,500	—	2,000
2	Customer Rates	System Wide Asphalt Rehabilitation	200	200	200	200	200	1,000
1	Customer Rates	Physical Site Security Improvements	200	200	—	—	100	500
Subtotal Administrative Outlays			1,670	1,870	1,550	2,850	1,550	9,490

Project Locations: Map of all *Administrative Outlays* projects are highlighted in the following map.

Truckee Meadows Water Authority FY 2023 - 2027 Capital Improvement Plan



Administrative Outlays

GIS/GPS System Mapping Equipment

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	GIS / GPS System Mapping Equipment	45	20	—	—	—	65

PROJECT DESCRIPTION: TMWA will have to update mapping equipment on a periodic basis to keep up with changes in technology; and to replace existing equipment as it reaches obsolescence.

SCHEDULE: Equipment is replaced and/or purchased as needed.



Administrative Outlays

IT Server Hardware

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	IT Server Hardware	45	30	—	—	—	75

PROJECT DESCRIPTION: TMWA currently has over 50 physical servers and 130 virtual servers, hosting a variety of enterprise software applications that support TMWA’s daily business operations. All physical servers are typically purchased with a three year warranty, with the expectation that they will reach the end of their system life cycle in a three to five year time frame, requiring a replacement. TMWA annually reviews its server platforms and can option a strategy of warranty extension, if cost effective, rather than outright hardware replacement. All servers require an Operating System Software license to run. Operating System Software is upgraded only when the current release is obsolete or a newer version offers a significant advantage over the current iteration.

SCHEDULE: Spending would be determined on an as needed basis.



Administrative Outlays

IT Network Security Upgrades

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	IT Network Security Upgrades	70	10	—	—	—	80

PROJECT DESCRIPTION: As a leading water purveyor for a major metropolitan area, TMWA is reliant on the internet for employee productivity enhancement and providing valuable customer information and outreach. Such dependency on the internet also carries a significant degree of risk, as it makes TMWA a major target for external security threats looming within globalized networks. To offset this risk and combat network threats, a variety of security specific hardware and software solutions are used, weaving them into a layered deployment strategy called Defense in Depth. In order to continually evolve and reinforce this Defense in Depth strategy and effectively fight new unforeseen threats, TMWA must continually acquire new security platforms that adapt to the continually changing security landscape.

SCHEDULE: Spending occurs only on an as needed basis.



Administrative Outlays

IT Physical Security Upgrades

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	IT Physical Access Security Upgrades	60	60	—	—	—	120

PROJECT DESCRIPTION: Security measures that are designed to deny unauthorized access to facilities, equipment and resources to protect personnel from damage or harm such as theft or attacks. Physical security involves the use of multiple layers of interdependent systems which can include surveillance, security guards, protective barriers, locks and other techniques.

SCHEDULE: Equipment is replaced and/or purchased as needed.



Administrative Outlays

Printer / Scanner Replacement

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	Printer / Scanner Replacement	—	100	—	—	—	100

PROJECT DESCRIPTION: TMWA currently has variety of printers and scanners that support TMWA’s daily business operations. All printers are typically purchased with a three-year warranty, with the expectation that they will reach the end of their system life cycle in a three to five year time frame, requiring a replacement. TMWA annually reviews its printer/scanner performance and business needs and can option a strategy of warranty extension, if cost effective, rather than outright replacement.

SCHEDULE: Equipment is replaced and/or purchased as needed.



Administrative Outlays

Crew Trucks/Vehicles

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
3	Customer Rates	Crew Trucks / Vehicles	900	850	950	1,000	1,100	4,800

PROJECT DESCRIPTION: TMWA's service fleet consists of light duty and heavy duty crew trucks. TMWA plans to cycle the light crew fleet over a period of seven to ten years. Spending is determined annually depending on vehicle availabilities and other factors. Spending only occurs if justified. TMWA's fleet cycles older vehicles to the treatment plants or other less demanding activities prior to disposal at auction. TMWA has scaled back spending on light vehicles for the past several years and a number of vehicles will be in excess of ten years old and greater than 120,000 miles of duty.

SCHEDULE: Equipment and employee needs are evaluated and updated annually.



Administrative Outlays Emergency Management Projects

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Emergency Management Projects	150	150	150	150	150	750

PROJECT DESCRIPTION: Various ongoing improvements to security infrastructure are required to protect TMWA facilities. TMWA has performed vulnerability assessment studies in the past and reviews the applicability of the findings to continually improve physical security as needed. In addition, TMWA is preparing a new disaster recovery plan with procedures to recover and protect water system operations.

SCHEDULE: Upgrades to security projects is ongoing and completed on a review of priorities each year.

PROJECT LOCATION: Various locations at treatment plants, at well sites, storage area for water fill station manifolds.



Administrative Outlays

Emergency Operations Annex-Design / Construction

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Emergency Operations Annex Design / Construction	—	250	250	1,500	—	2,000

PROJECT DESCRIPTION: TMWA is currently in the planning and conceptual design phase for a Primary Emergency Operations Center (EOC) including Disaster Recovery (DR) capacity. TMWA's EOC will relocate from the current location at the corporate office to the Chalk Bluff Water Treatment Plant. Which includes scope review, design, and contract bid packages, bid and award, construction, and testing. Potential emergency operations would include responding to earthquakes, floods, or other emergency related events.

SCHEDULE: Construction of water fill stations at four tank sites, standby power retrofits at four existing wells and ten portable water fill manifold stations to be completed in FY's 2024-2026.



Administrative Outlays

System Wide Asphalt Rehabilitation

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
2	Customer Rates	System Wide Asphalt Rehabilitation	200	200	200	200	200	1,000

PROJECT DESCRIPTION: TMWA has 96 tanks, 100 wells, 116 pump stations, 2 storage reservoirs and 5 treatment plants, most of which have some asphalt pavement. It is much more economical to extend the life of existing pavement with routine maintenance such as repairing cracks and applying slurry seals than it is to prematurely replace the pavement.

SCHEDULE: This is a new reoccurring maintenance item. It is originally assumed that up to 15 sites per year will receive some sort of rehabilitation that may include patching, crack repair, slurry seal and/or partial replacement.



Administrative Outlays

Physical Site Security Improvements

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Customer Rates	Physical Site Security Improvements	200	200	—	—	100	500

PROJECT DESCRIPTION: Physical site security improvements for Chalk Bluff, Glendale and Corporate sites are based on Department of Homeland Security (DHS) Vulnerability Assessments. Recommended priorities included bringing site perimeter fencing up to DHS minimum standards, expanding our security camera network for better site perimeter coverage, general exterior lighting improvement throughout both treatment plants and the use of intrusion detection systems. Landscaping improvements were also noted to help prevent unauthorized access, improve overall visibility, and protect TMWA personnel and buildings.

SCHEDULE: The project began in FY 2021 and will continue through FY 2024 and begin again in FY 2027.

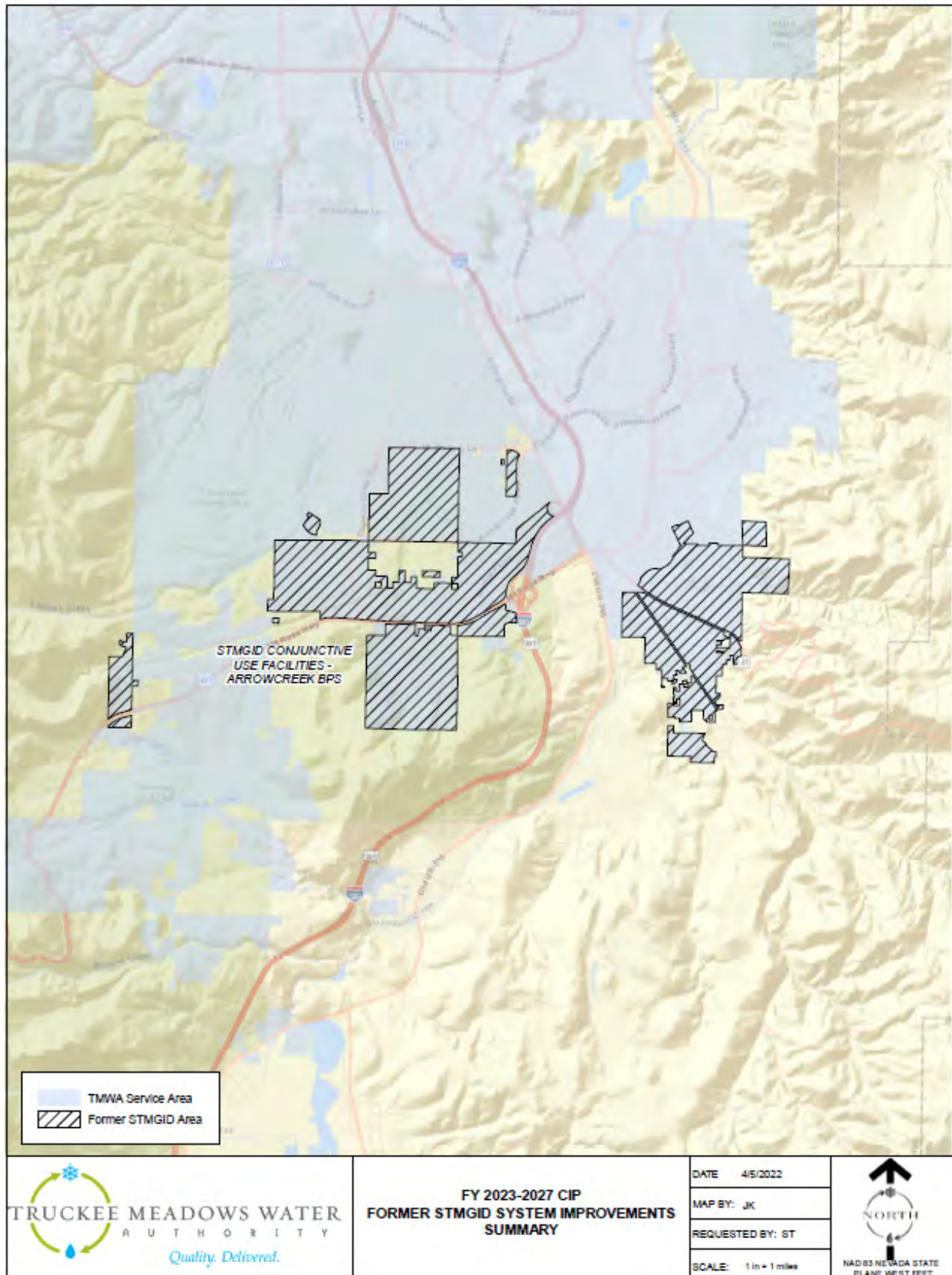


FORMER STMGID SYSTEM IMPROVEMENTS Summary

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Reserve	STMGID Conjunctive Use Facilities - Arrowcreek BPS	3,450	—	—	—	—	3,450
Subtotal STMGID System Improvements			3,450	—	—	—	—	3,450

Project Locations: Map of all *Former STMGID System Improvements* projects are highlighted in the following map.

Truckee Meadows Water Authority FY 2023 - 2027 Capital Improvement Plan



Water Main-Distribution & Service Line Improvements

STMGID Conjunctive Use Facilities - Arrowcreek Booster Pump Station

FUNDING TIMELINE:

Priority	Funding Source	Description	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	CIP Total
1	Reserve	STMGID Conjunctive Use Facilities - Arrowcreek BPS	3,450	—	—	—	—	3,450

PROJECT DESCRIPTION: The project involves construction of a new booster pump station on the reclaim water reservoir site on Arrowcreek Parkway and approximately 8,100 feet of 14-inch discharge pipe on Arrowcreek Parkway to the STMGID Tank 4/5 pressure zone. Approximately \$0.5 million of the \$2.7 million will be used for pipeline oversizing which will be allocated to new development. The facilities will provide off-peak supply which will allow TMWA to implement conjunctive use in the STMGID West system.

SCHEDULE: Construction of the pipeline was completed in FY 2019 and the booster station design/construction is scheduled to begin in FY 2023.





Photo: Fleish Hydro Forebay Spill

Photo By: Chris Hires, Hydro/Diesel Generation, HVAC, & Property Maintenance Supervisor



STAFF REPORT

TO: Board of Directors
THRU: Mark Foree, General Manager
FROM: Stefanie Morris, Water Resources Manager
DATE: March 7, 2022
SUBJECT: Discussion and possible action to enter into a funding agreement with the National Forest Foundation for the Lady Bug Project fuels reduction project above Stampede Reservoir

BACKGROUND

Protecting the upper watershed for TMWA's water supply is critical. With the changes in climate and fire behavior, fuels reduction in the upper watershed is necessary to protect the community's water supply. Importantly, targeted fuels reduction around the Truckee River, local creeks, and upstream reservoirs will help mitigate the risk of serious water quality issues from sediment loading and loss of reservoir capacity. TMWA staff have been exploring opportunities for collaboration, funding, and partnerships. Staff have identified the Lady Bug Fuels Reduction project above Stampede Reservoir as a priority project to protect TMWA's water resources. Staff is requesting a total of \$500,000 (approximately 13 percent of project costs) over the next two fiscal years to fund this pilot project.

DISCUSSION

The Lady Bug Project is located on the ridge directly above and sloping down to Stampede Reservoir. The Project would complement other fuels reduction work completed in the area. The Project is located on federal land and is estimated to cost approximately \$3,800,000. Several funds have already been committed for this project but there is currently a \$650,000 funding gap.

The Lady Bug Project would treat 2,500 acres around Stampede Reservoir. This treatment would occur on the slope and along the ridge where runoff drains directly into the reservoir. The United States Forest Services (USFS) and other federal partners have completed the necessary environmental review and the project is ready for implementation. The project will be implemented by the National Forest Foundation (NFF) through their existing agreement with the USFS and is set to be completed in 2025. The following table shows the existing secured funding by party, including TMWA's proposed contribution. If approved, TMWA would contribute \$250,000 in fiscal year 2022-2023 and an additional \$250,000 in fiscal year 2023-2024 through a funding agreement with NFF.

Funding Source	Amount	Project Percent
USDA Forest Service	\$1,400,000	37%
California Wildlife Conservation Board	\$650,000	17%
The Nature Conservancy	\$1,100,000	29%
Private Donations	\$35,000	1%
Unfunded (excluding indirect and project management expenses)	\$650,000	17%
Total	\$3,835,000	
Proposed TMWA Contribution (over 2 years)	\$500,000 ¹	13%

TMWA's contribution to this project will provide local flexible funding. Unlike state and federal funding, TMWA's funds do not have restrictions. This allows for NFF to manage the project and implement more efficiently. For example, some funding sources do not allow road work. Road work can often be necessary for the project to begin. This kind of restriction could hold up implementation. However, with flexible local funds, the Parties can leverage state and federal funding and efficiently implement the project.

RECOMMENDATION:

Staff recommends funding the Lady Bug Pilot Project. With TMWA's funding the project can move forward while funding for the remaining \$150,000 is pursued. This project protects Stampede Reservoir capacity and water quality and the community's drought supply. As staff continues to work with the USFS, NFF, The Nature Conservancy, and the Truckee River Watershed Council on larger planning efforts in our watershed, this project will have immediate benefit and provide a platform for future planning, gap analysis, and priority projects.

¹ These dollars are included in TMWA's proposed budget.

LADYBUG PROJECT AND MIDDLE TRUCKEE RIVER WATERSHED VEGETATION MANAGEMENT PLANNING

June 2022



USFS FIRESHED REGISTRY (MAY 2021)

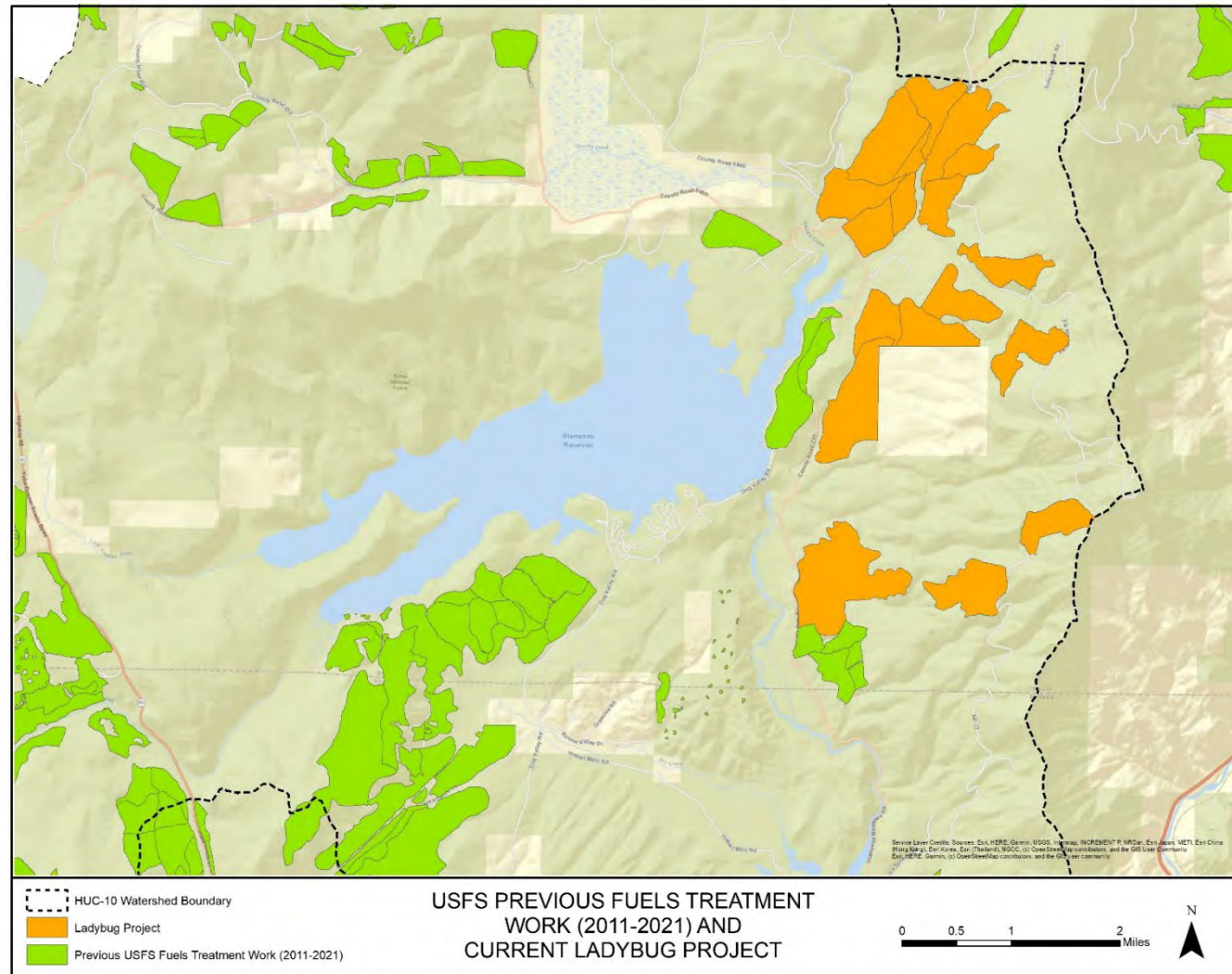


- Part of the Truckee River Watershed was identified as one of the top 10 priority firesheds for the US Forest Service Region 5
- Identified for a multiyear national investment strategy to reduce risk

LADYBUG PROJECT

- Pilot project for long-term collaborative partnership
- Helps protect Stampede Reservoir
- Complements prior forest restoration work
- Multiple partners
- 2,500-acre project area
- Expected completion in 2025

USFS EXISTING FUELS TREATMENT WORK (2011-2021)



BUDGET AND FUNDING SOURCES

Funding Source	Amount	Percent
USDA Forest Service	\$1,400,000	37%
California Wildlife Conservation Board	\$650,000	17%
The Nature Conservancy	\$1,100,000	29%
Private Donations	\$35,000	1%
Unfunded (excluding indirect and project mgmt. expenses)	\$650,000	17%
Total	\$3,835,000	
Proposed TMWA Contribution (over 2 years)	\$500,000	13%

TMWA FUNDING

- Closes funding gap
- Flexible local cost share to help efficiently implement project
- Funding Agreement with National Forest Foundation
- Protects Stampede Reservoir storage capacity and water supply for the community



Large amounts of sediment end up in drainages around Cheesman Reservoir due to the Hayman Fire of 2002.

Photo credit: Denver Water

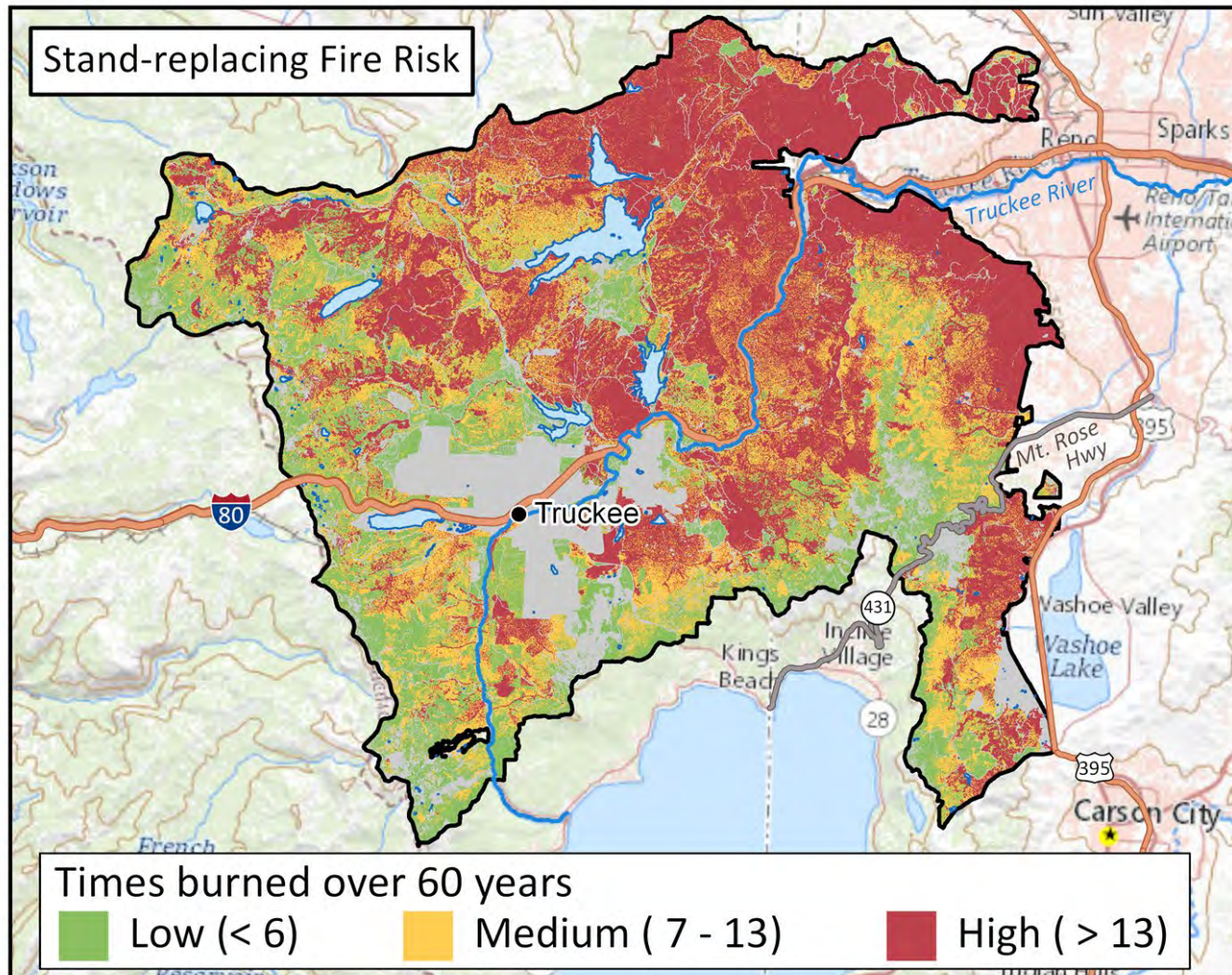
LONG-TERM COLLABORATIVE PARTNERSHIP

- Goal: Increase pace and scale of forest restoration work in the Middle Truckee River watershed
- Partnership development:
 - USFS – Tahoe National Forest
 - National Forest Foundation
 - The Nature Conservancy – Nevada Chapter
 - Truckee Meadows Water Authority
 - Truckee River Watershed Council
 - Other future partners to be identified

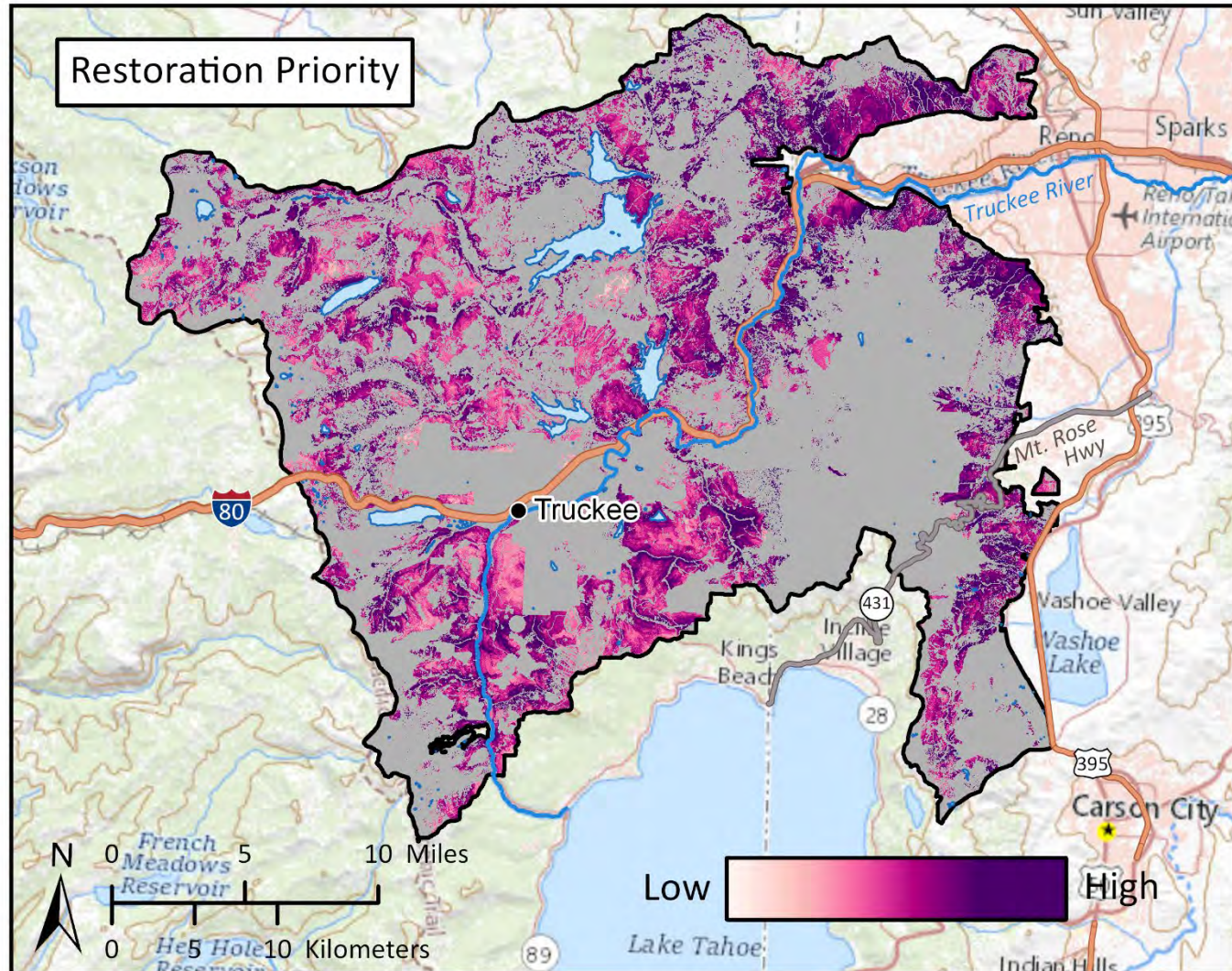
10-YEAR VEGETATION MANAGEMENT PLAN

- Approximate goal of 50,000 acres in 10 years
- Categories of projects:
 - Projects already planned by USFS
 - 5 priority projects identified by partners
 - Working together to identify a tool to select additional projects

TNC LCF MODELING: STAND-REPLACING FIRE RISK (FIRE PROBABILITY)



TNC LCF MODELING: PRIORITY RESTORATION AREAS



PRIORITY PROJECT RANKING

- Core planning group using ranking system (Pillars of Resilience) developed by the Tahoe Central Sierra Initiative - top 4 categories:
 - Water Security
 - Forest Resilience
 - Fire Dynamics
 - Biodiversity Conservation

TMWA'S ROLE



Forest thinning completed in Dog Valley

Photo Credit: Mickey Hazelwood, The Nature Conservancy

- Helping leverage local funding to support larger state and federal grants
- Assisting with planning and environmental work
- On-the-ground implementation will be completed by other partners

QUESTIONS?